



AADITYA MECHATRONICS

Pioneer in Industrial Automation



Précised Measuring & Controlling Equipment's.
Excellent Quality.
Excellent Durability.

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About Us

Aaditya Mechatronics is one of the leading manufacturer and exporter of Precision Temperature Measuring and controlling instruments. incorporates Proven design and Assembly features acquired from many years of experience in providing Temperature Indicators/Controllers for Power & Distribution Transformers.

An enterprising approach over the decades steered experience Aaditya Mechatronics from its modest beginning to its present capabilities in the field of temperature measurement and control Equipment's.

Aaditya Mechatronics has proudly established itself as the front-runner in the field of temperature measurements.



Products

- ⇒ **Dial Type Thermometers**
- ⇒ **ROTI/RWTI**
- ⇒ **Remote Indicator**
- ⇒ **Digital Repeater**
- ⇒ **BTD**
- ⇒ **Marshalling Boxes**
- ⇒ **RTCC**
- ⇒ **AVR**
- ⇒ **Tap Position Indicators**
- ⇒ **TPT-Tap Position transmitter**
- ⇒ **Wti Scanner**
- ⇒ **ETM-Electronic Temperature Monitoring**
- ⇒ **PT-100 Sensors**



Transformer Monitoring and Controls

Dial type Thermometers

Dial type Thermometers are used for indicating and controlling of Temperature for oil cooled transformers. Top oil is directly sensed by the sensing bulb (**OTI**) and Winding temperature of the transformer is simulated using CT secondary current over the Top oil temperature (**WTI**).

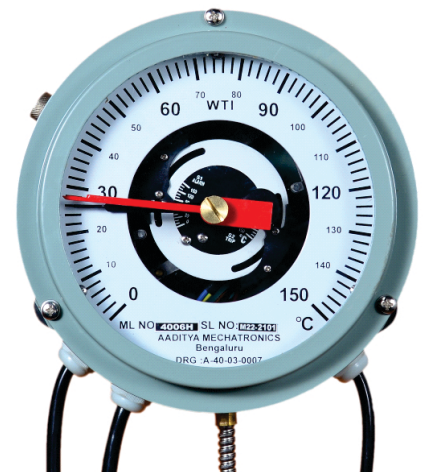
Model No: 4031/4031H

Temperature range	: 0-150°C
Dial Graduation	: 2 °C
Accuracy Class	: 1.5% FSD
Angular Sweep	: 60°
No. of Switches	: 2
Contact rating	: 5A@250v AC 0.5 A @ 220V DC
Switching Accuracy	: ± 4°C
Max Capillary Length	: Up to 15 mtrs



Model No: 4006/4006H

Temperature range	: 0-150°
Dial Graduation	: 2 °
Accuracy Class	: 1.5% FSD
Angular Sweep	: 270°
No. of Switches	: 2
Contact rating	: 5A@250v AC 0.5 A@ 220V DC
Switching Accuracy	: ± 4°
Max Capillary Length	: Up to 15 mtrs



Model No: 4005A/4005AH

Temperature range	: 0-150° / 30-150° / 20-140° / 0-160°
Dial Graduation	: 1 °
Accuracy Class	: 1% FSD
Angular Sweep	: 270°
No. of Switches	: 6
Contact rating	: 15A@250v AC 0.5 A@ 220V DC
Switching Accuracy	: ± 4°
Max Capillary Length	: Up to 25 mtrs



Model No: 4007/4007H

Temperature range	: 0-150°C
Dial Graduation	: 2 °C
Accuracy Class	: 1.5% FSD
Angular Sweep	: 60°
No. of Switches	: 4
Contact rating	: 15A@250v AC 0.5 A@ 220V DC
Switching Accuracy	: ± 4°C
Max Capillary Length	: Up to 25 mtrs



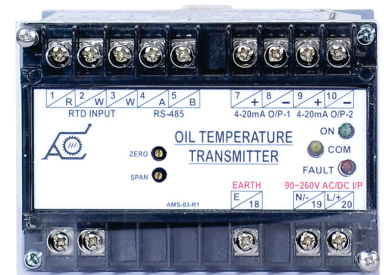
Hybrid Models (H)

Dial type Thermometers OTI and WTI all models are available with Hybrid Models (H), Hybrid model where temperature is sensed by PT100 sensor which is embedded inside the sensing bulb and these Hybrid models will be Provide with external CCU (or) inbuilt CCU for rectangular models.

Supplements with Hybrid Models

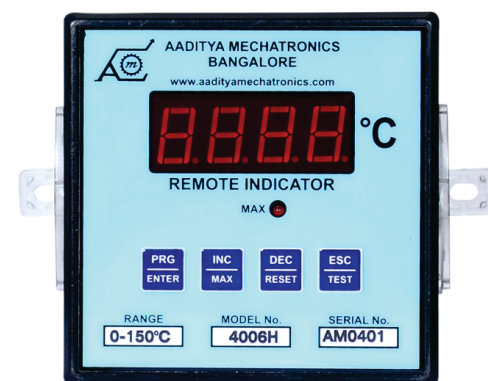
ROTI/RWTI (CCU)

Power Supply	: 90-260V AC/DC, 50Hz
Input	: PT 100 RTD (3 wire Simplex)
CT Signal in case of WTI	: 0-5A AC
Signal Output	: Upto 2 sets of 4-20mA DC (600 Ohm resistance burden including cable resistance)
Degree of Protection	: IP 40 of Enclosure.
Overall Dimension	: 100(L) X 75 (W) X 112(D) MM with Din rail Mount.



Remote Indicator

Power Supply	: 90-260V AC/DC, 50Hz
Display	: 4 Digits , 0.56 Inch , 7 Segment Red color Display
Resolution	: 0.1 °C
Input	: 4-20mA Signals from CCU
Signal Output	: Up to 4 sets of 4-20mA DC
SCADA Communication	: RS485 RTU Protocol
Degree of Protection of	: IP 20 Enclosure



Digital Repeater

Input	: 0-2.8k ohm Resistance Input
No.of Input	: One
Range	: 0-150 °C
Resolution	: 0.1 ° C
Display	: QUAD seven segment LED display
Power Supply	: 90-260V AC/DC, 50Hz



BTD-Bearing Temperature Detector

Temperature range	: 0-150°C
Dial Graduation	: 2 °C
Accuracy Class	: 1.5% FSD
Angular Sweep	: 270°/240°
No. of Switches	: NIL/ 2 Switch (Optional)
Contact rating	: 5A@250v AC, 0.5 A 220V DC
Switching Accuracy	: ± 4°C
Max Capillary Length	: Up to 15 mtrs



Marshalling Box/FCC

The marshalling box/ FCC is a local controlling unit mounted near the Transformer. All types of transformer protection accessories like winding & oil temperature indicators and other necessary components are assembled and wired up into this marshalling box. For remote monitoring of these instruments, their potential free contacts are wired up to the RTCC panel or the incomer panel through multi core cables. These panels can be of stand alone or tank mounted type. We have tested our standard Marshalling Box design for IP-55. All necessary components used in the panel are of reputed makes with high quality.



RTCC

Remote Tap Changer Control (RTCC) is a conventional equipment to control the output of the Transformer from the OLTC unit fitted in the transformer. The desired voltage will be achieved accordingly by controlling the OLTC with respect to the tap position through RTCC system. The output voltage of the transformer will be maintained through an AVR (Automatic Voltage regulator), which continuously verifies the output power with the set / programmed reference voltage and will trigger the OLTC accordingly. RTCC panel controls are same irrespective of OLTC type whether in tank or external mount OLTC.



AVR-Automatic Voltage Regulating Relay

Microcontroller Based Design

Wide range of Aux. Supply

Aux. supply : 90-260V AC/DC, 50Hz

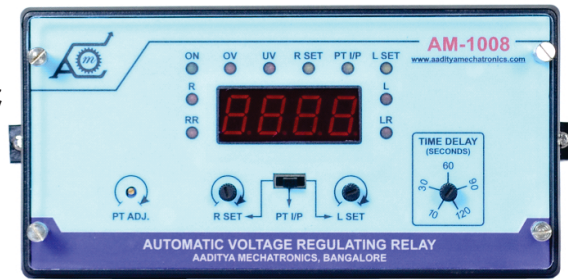
PT supply : 110V AC, 50Hz

Nominal Setting (NS) : 85-155V

Lower setting (LS) : 95-125V

Raise setting (RS) : 90-120V

Time delay : 1-120 seconds programmable



TPI-Tap Position Indicator

TPI's are used to indicate the Tap position of the Power Transformer with On Load Tap-Changer (OLTC).

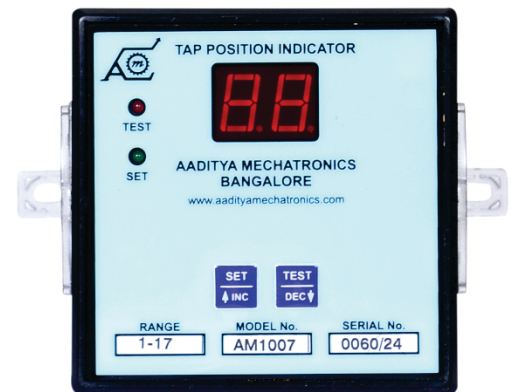
Max. No. of tap positions : 35 Taps

Step Resistance/Tap : 1K

Display : 2 Digit 7 segment LED

Auxiliary Supply : 90-260V AC/DC, 50Hz

Panel Cut-out Dimensions : 92 x 92 mm (H x W)



TPT-Tap Position Transmitter

TPT which converts the Tap positions of the transformer into corresponding 4-20mA dc signal. This signal is used to display the Tap Position at a remote point.

Power Supply : 90-260V AC/DC, 50Hz

Input : Tap changer switch potential free contacts

Analog Output : 4-20 mA Suitable for 500Ω Burden

Accuracy : $\pm 0.2\text{mA}$ at any point of 4-20mA

Range : 1 to 17 position (other range on order)



WTI SCANNER - 4 Channel & 8 Channel

Monitoring the temperatures of L.V. windings of the Dry-Type Transformer/Cast Resin Transformers, these instruments display the winding temperatures and take necessary control action as per set and differential values programmed by the user.

Temperature sensor input	: RTD (PT-100 DIN 43760)
No. of sensor Inputs	: Four and Eight
No. of Relays	: 4
Range	: 0-300 °C
Resolution	: 0.1 °C
Accuracy	: $\pm 1^{\circ}\text{C}$
Supply voltage	: 90-260V AC/DC, 50Hz



ETM-Electronic Temperature Monitoring

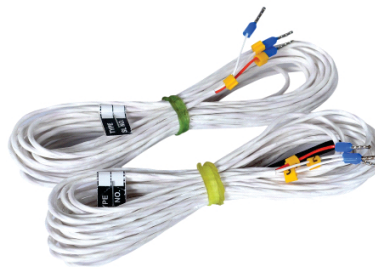
This Scheme used to indicate and Control Oil & Winding Temperature of the oil – immersed transformers. 6 Relays are provided for Alarm, Trip and Cooler functions and operate as per the set value.

Temperature sensor input	: RTD (PT-100 DIN 43760)
No. of sensor Inputs	: One
CT secondary current Input	: 1.0A – 5.0A (User Selectable)
Temperature Rise	: 1°C – 60°C (User selectable)
No. of set points for OTI & WTI	: 2 & 4 Respectively
Range	: 0-150°C
Resolution	: 0.1 °C
Accuracy	: $\pm 1^{\circ}\text{C}$
Supply voltage	: 90-260V AC/DC, 50Hz



SENSORS

- * PT-100, 3/6 Wire
- * Temp. range – 0 to 300° C
- * Class B
- * Customized Sensing Bulb on Request



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