

**Hybrid OTI / WTI**
**General Features**

- The fully sealed liquid expansion in the system provides a self powered indication and operation to the instruments, and does not require any trimming or other periodic adjustments.
- Instruments are fully compensated for ambient temperature.
- The WTI instruments have a built in Thermal imaging system for transformer's hot spot indication.
- The WTIs are provided with gradient adjustment through a shunt for CT secondary input (1A to 5A).
- **Embedded PT-100 sensors in the sensing bulb of the local OTI/ WTI provide for a master indication.**
- Current Converter Unit (CCU) is mounted inside the Local OTI/WTI, The output from which can be connected to remote indicator or SCADA are a combination of both.
- For the WTIs additional Winding temperature simulator is provided
- Instrument cases are aluminium die casted and polyester powder coated. Each instrument has anti vibration mountings and are provided with projection mounting clamps.
- A maximum pointer facility is provided, can be reset from outside.
- All switch contacts are potential free micro switches

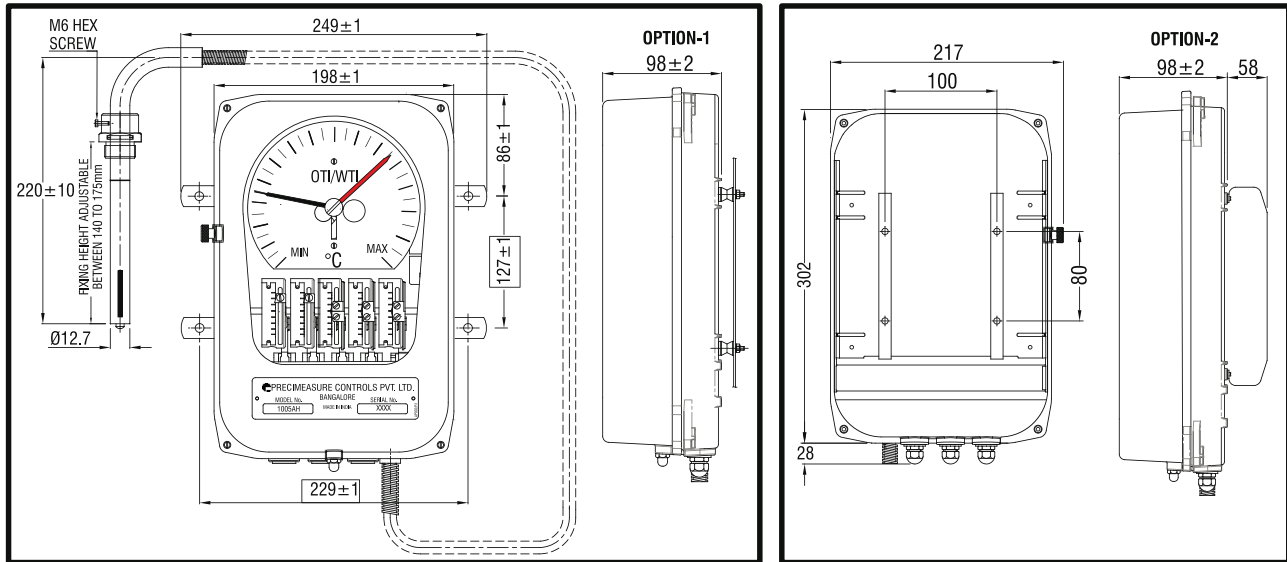
**ML : 1005H/1005AH**

**Remote indicator 96 Sq**


SPECIFICATIONS	Model : 1005H	Model : 1005AH
Temperature Range	0-150°C, 0-160°C, 30-150°C, -20 to 140°C	0-150°C, 0-160°C, 30-150°C, -20 to 140°C
Dial Size	150mm (6") Round	150mm (6") Round
Dial angular Sweep	270°	270°
Dial Graduation	1°C	1°C
Accuracy Class	±1% of FSD	±1% of FSD
Max.No. of Switches	5	5
Switching Range	15% - 85%	15% - 85%
Contact Rating	<b>3A @ 250V AC/DC</b> <b>Magnetic Blowout Micro switch</b>	<b>15A @ 250V AC</b> <b>0.5A @ 250V DC</b> <b>Standard Micro switch</b>
Switch Differential	S1 & S2: 3°C to 9°C (6±3°C) Fixed S3 to S5: 8°C to 40°C Adjustable.	S1 & S2: 3°C to 9°C (6±3°C) Fixed S3 to S5: 8°C to 40°C Adjustable.
Switching Accuracy	±2.5 °C of Set Value	±2.5°C of Set Value
Remote indicator	Available / 4 - 20mA / RS - 485	Available / 4-20mA / RS - 485
Max. Capillary Length	Up to 25 Mtrs.	Up to 25 Mtrs.
Switch Test Knob	Available	Available
Electrical Connection	Press Fit Wago Type	Press Fit Wago Type
Degree of Protection	IP – 55(IEC-60529)	IP – 55(IEC-60529)
High Voltage Test	2.5 KV AC, 50Hz/60Hz for 1 minute; Switch connection & C.T. Terminal to ground. CCU output 0.5 KV AC 50Hz / 60Hz for 1 minute	2.5 KV AC, 50Hz/60Hz for 1 minute; Switch connection & C.T. Terminal to ground. CCU output 0.5 KV AC 50Hz / 60Hz for 1 minute
Electrical entry	M20 - 3Nos	M20 - 3Nos
Cable Gland	Optional	Optional
Thermometer Pocket	Optional	Optional

**SPECIFICATIONS**

Type	4 digits, 0.5" Seven Segments LED's
Auxillary Supply	90 – 260V AC/DC
Resolution	0.1°C
Degree of protection of enclosure	IP 20
Operating Temperature Range	0°C to 60°C
Signal output	4 sets of 4 - 20mA DC Optional RS 485
Cutout dimension	92 Sq.mm



## Type Tested For

1. Protection class :  
IP55 as per IEC 60529 CAT 2.
2. Cold and Dry Test :  
-40°C to +70°C
3. Vibration Test :  
Amplitude 1mm, frequency 50Hz,  
1Hr / X,Y,Z axis
4. Salt Spray Test :  
For polyester powder coating and  
SS 304 Armour for 500 Hrs as per  
DIN 50021 Standard
5. Micro Switch rating Test :  
a) ML - 1005H:  
3A @ 250V AC &  
3A @ 250V DC  
b) ML - 1005AH:  
15A @250V AC &  
0.5A @250V DC

## Ordering Information

MODEL	1005H/1005AH
Type of Instrument	OTI / WTI
Range	R1. 0 - 150°C R2. 0 - 160°C R3. 30 - 150°C R4. -20 to 140°C (other ranges on request)
No. of Switches	S2 - 2switches S3 - 3switches S4 - 4switches S5 - 5switches
Switch Configura- tion	L - Normally open contact L2 - Changeover contact
Capillary Length	C1 - 1mts C2 - 2mts..... upto C25 - 25mts
Union Type	U1 - 1/2" BSP Male U2 - 3/4" BSP Male U3 - 1" BSP Male U4 - 1/2" BSP Female U5 - 3/4" BSP Female
CCU Output for indication / Scada	RI - Remote indicator - T1/T2/T3/T4 (for types, Refer Drawing) PSU - External power supply with 2 Nos. of 4-20mA output
If WTI please specify	Transformer CT Secondary output.....(1A to 5A) Simulated Temperature rise over top oil..... (5°C to 30°C)

Note: WTI Gradient is factory set. If required customer can adjust as per requirement.

Sample Ordering Information : 1005AH\OTI\R4\S4\L\C6\U4\RI-T2 ..... Amps .....°C



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