

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.
- WTIs are calibrated & supplied suitable for range of CT secondary input & temperature rise.
- Instrument cases are aluminium die casted and polyester powder coated, and provided with projection mounting clamps. As per enclosure part no. EN7.
- A maximum pointer facility is provided, can be reset from outside.
- All switch contacts are potential free micro switches.

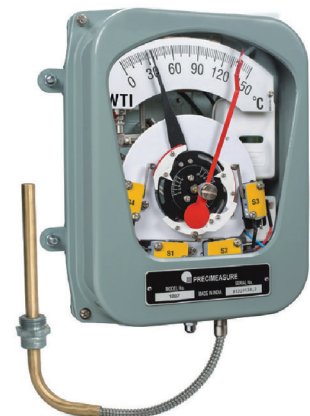
Hybrid Models Contain

- **Embedded PT-100 sensor in the sensing bulb of the local OTI/WTI for master indication.**
- Current Converter Unit (CCU) is mounted inside the Local OTI/WTI, CCU output to be connected to our External PSU or Remote indicator unit.

General Standard Specifications

Temperature Range	0-150°C, Standard (other ranges on request)
Dial Size	115mm, Segment Dial
Dial angular Sweep	60°
Dial Graduation	2°C
Accuracy Class	± 1.5% of FSD
Contacts	Upto 4 Normally open Contacts
Contact Rating	Standard Micro Switch 15A @ 250V AC or 0.5A @ 250V DC
Switching Range	15% - 85% of FSD
Switch Differential	S1 & S2: 3°C to 9°C (6±3°C) Fixed S3 to S4: 8°C to 40°C Adjustable.
Switching Accuracy	±2.5°C of Set Value
Max. Capillary Length	Up to 25 Mtrs (Bottom Entry)
Electrical Connection	Press Fit Wago Type
Window Glass	UV Resistant Polycarbonate
Degree of Protection	IP – 55 (IEC - 60529 Cat -II)
Electrical entry	M20 Threaded Holes - 3Nos

MODEL 1007/1007H



Hybrid Models Specification

Embedded Pt100 sensor	Calibration as per IEC 60751-1985/DIN 43760	
Built in CCU	CCU is mounted inside the Local OTI/WTI	
OTI	Signal input	Pt 100
	Supply input	24v Dc-through our make PSU/Remote indicator
For WTI	Additional Winding temperature simulator is provided inside the local WTI.	

Optional Spec

Temperature Range	0-160°C / 30-150°C / -20-140°C / other range on request
Contact Rating	Magnetic blowout Micro Switch 15A @ 250V AC or 5A @ 250V DC
Switch Configuration	Change over Contacts
Cable Gland	Brass / polyamide / others on request
Thermometer Pocket	On request
Connector Type	½" / ¾" / 1" BSP M/F Brass / Aluminum Alloy
Capillary Entry	Top Entry

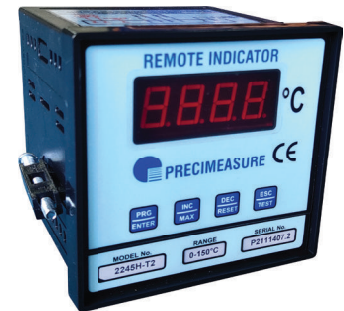
Remote Indicator Options

Dial Type Thermometer Models	Suitable Digital Remote Indicator Models	Remote Indicator Signal Inputs
1007H Built in CCU	Model 2245H	Suitable Hybrid Model Connection from built-in CCU inside Local OTI/WTI
1007H Built in CCU and external PSU	Model 2245	Suitable for 4 - 20mA input from External PSU

Note: Refer Ordering information for various types of remote indicators

Remote Indicator General Specification

Type	Quad Seven segment LED display
Resolution	0.1°C
Auxiliary Supply input	90-260V AC/DC
Degree of protection	IP 20
Operating temperature	0-60°C
Mounting Cutout	92 sq.mm in panel, Mounting side clamp
Signal input	Suitable for connection from built-in CCU inside the Local OTI/WTI / External PSU
Signal output	Refer table below (Remote Indicator Output Options)
Power Consumption	5 Watts



Remote Indicator 96 Sq

PSU Spec

Signal input	Suitable for connection from built-in CCU inside Local OTI/WTI
Auxiliary supply input	90-260v AC/DC
Signal Output	2Nos. 4-20mA DC
Burden on signal outputs	Maximum 600Ω including loop resistance
Mounting	Din rail or Screw fixing
Degree of protection	IP 40 for housing & IP 10 for terminals
Power Consumption	3Watts

PSU



Note: Available Scheme options referenced below. Please contact us for details.

1. Standard (1007)
2. Hybrid and External Remote Indicator (1007H + RI)
3. Hybrid and External PSU (1007H + PSU)
4. Hybrid & External PSU + Remote Indicator (1007H + PSU + RI)

Routine and Type Tests Conducted

- 1 Routine test : HV Test and IR Test and Calibration Test
- 2 Protection class:
IP55 as per IEC 60529 CAT II.
- 3 Cold Test: -40°C as per IEC 60068-2-1
Dry Heat Test: + 70°C as per IEC 60068-2-2
- 4 Vibration Test: as per IEC 60068-2-6
Displacement : 0.15mm,
Frequency: 10-55Hz,
Duration: 1hr. 20min/X,Y,& Z axis
- 5 Salt Spray Test:
For polyester powder coating and SS 304 Armour for 500 Hrs as per DIN 50021 Standard
- 6 Micro Switch rating Test:
 - a) 15A @ 250V AC & 0.5A @ 250V DC
 - b) 15A @ 250V AC & 5A @ 250V DC

Basic Ordering Information

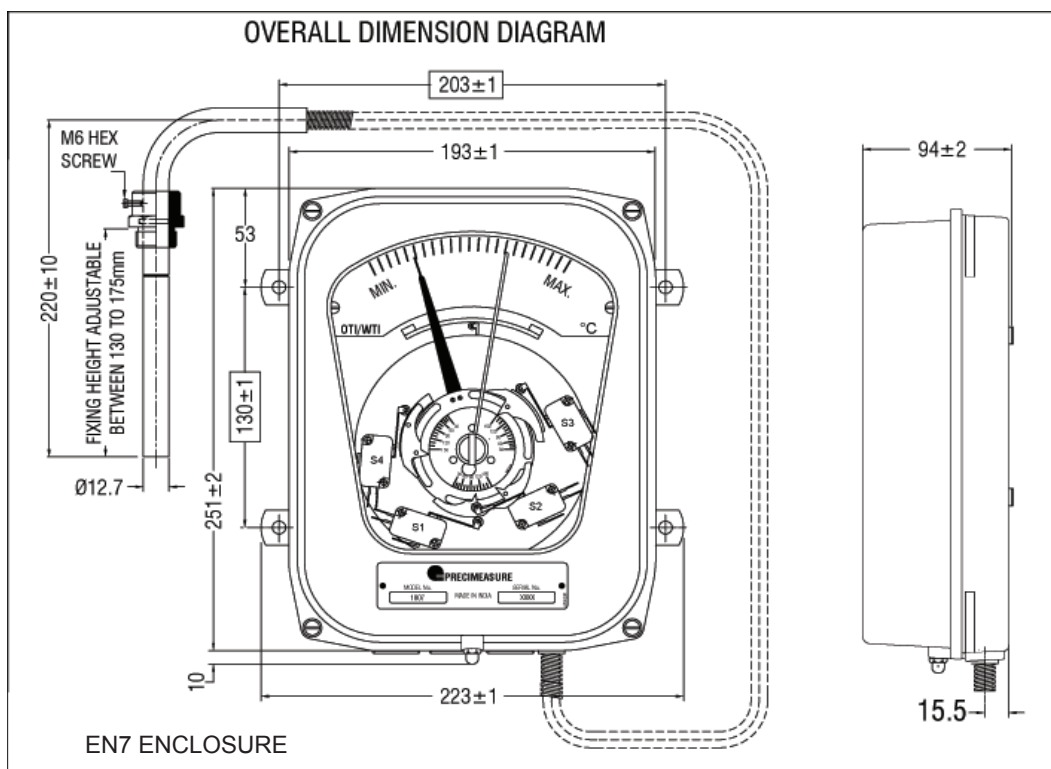
Select Your Model	<ul style="list-style-type: none"> • Standard -1007 • with 1 inbuilt PT 100 Sensor (Simplex) & CCU - 1007H 	
Switch Contact Rating	OP1 - Option 1 - Standard Micro Switch OP 2 - Option 2 - Magnetic Blowout Micro Switch	
Type of Instrument	OTI/WTI	
Range	R1.0 - 150°C R2.0 - 160°C R3.30 - 150°C R4. -20 to 140°C (other ranges on request)	
No. of Switches	S2 -2switches S3 -3switches.....upto S4 switches	
Switch Configuration	L- Normally open contact L2 - Changeover contact	
Capillary Length	C3 - 3 mtrs C8 - 8 mtrs C12 - 12 mtrs C20 - 20 mtrs	C5 - 5 mtrs C10 - 10 mtrs C15 - 15 mtrs C25 - 25 mtrs
Union Type	U1 - ½" BSP Male U2 - ¾" BSP Male U3 - 1" BSP Male U4 - ½" BSP Female U5 - ¾" BSP Female Other threads on request	
Indicator	RI - Remote Indicator (for options please see Note below)	
If WTI please specify	Transformer CT Secondary output Simulated Temperature rise over top oil Contact Precimeasure for gradient graph	

Note:

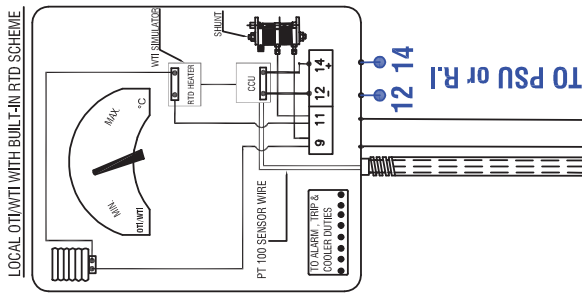
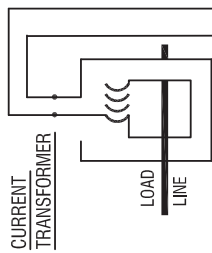
Remote Indicator	Options T1 - Indication only. T2 - 2Nos, 4-20mA DC outputs. T3 - one 4-20mA DC output + 2Nos. Change over relay contacts T4 - one 4-20mA DC output + RS 485 Modbus RTU protocol T5 - 4Nos. of 4-20mA DC outputs.
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Note: WTI Gradient calibration is factory set as per customer specification. If required, a provision is made for small adjustment at site.

Sample Ordering Information : 1007\OP1\WTI\RI\S4\L2\C6\U1\RI-T1\..... Amps oC



SCHEMATIC CONNECTION DIAGRAM FOR (SIMPLEX) HYBRID INSTRUMENTS.



LOCAL OTI/WTI SENSING BULB WITH EMBEDDED PT-100 SENSOR

NOTE: CT CONNECTION ONLY FOR WTI

CAUTION: FOR PSU/R.I SIGNAL INPUT & OUTPUTS CONNECTION, USE SHIELDED (Ø7) ARMOURED 2 CORE 2.5 Sq. mm TWISTED COPPER CABLES AND NOT TO EXCEED 1 K.M. SHIELD (Ø9) ARMOUR SHOULD BE EARTHED AT ONE END, AND SHOULD NOT RUN ALONG WITH POWER SUPPLY CABLE.

PT-100 SENSOR SIMPLEX

EN7 ENCLOSURE

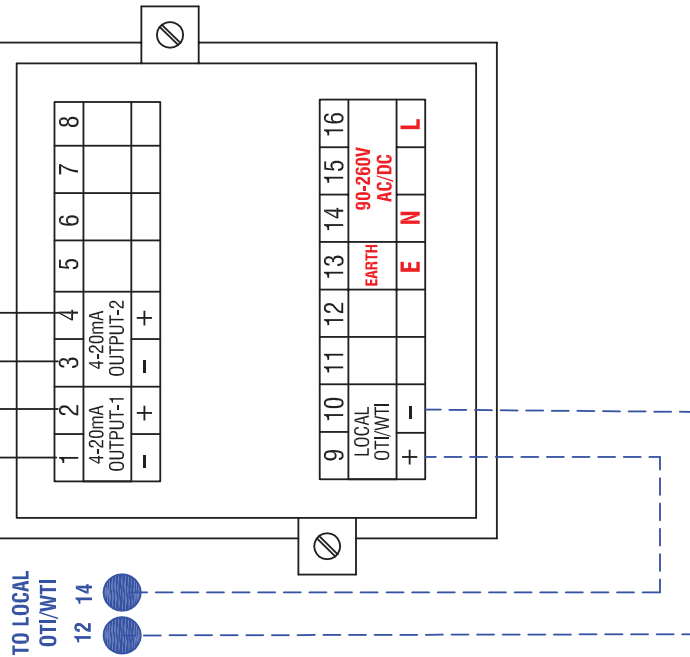
TRANSFORMER

LOCAL MARSHALLING BOX KIOSK

HYBRID OPTION - 1 EXTERNAL REMOTE INDICATOR

4-20mA OUTPUT-1
TO SCADA/DAS
(MAX. BURDEN = 600 Ohms)

4-20mA OUTPUT-2
TO SCADA/DAS
(MAX. BURDEN = 600 Ohms)



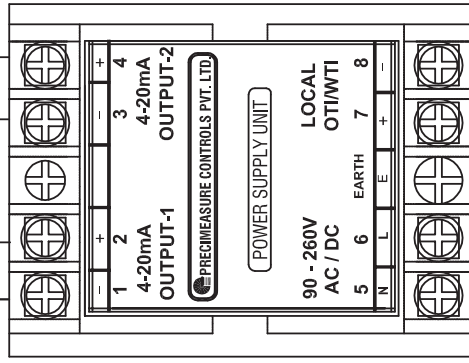
REMOTE CONTROL PANEL

HYBRID OPTION - 2 EXTERNAL POWER SUPPLY UNIT

4-20mA OUTPUT-1
TO REMOTE INDICATOR
(MAX.BURDEN = 600 Ohms)

4-20mA OUTPUT-2
TO SCADA/DAS
(MAX.BURDEN = 600 Ohms)

TO LOCAL OTI/WTI 12 14



LOCAL MARSHALLING BOX KIOSK