

## 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. EN31
- 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.**

### 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 2 Normally open Contacts
Contact Rating	Standard Micro Switch 5A @ 250V AC or 0.5A @ 250V DC
Switching Range	15% - 85% of FSD
Switch Differential	1°C to 5°C (3°C±2°C) Fixed
Switching Accuracy	±2.5°C of Set Value
Max. Capillary Length	Up to 10 Mtrs
Electrical Connection	1 Sq. mm Copper cable, 1mtr length
Window Glass	UV Resistant Polycarbonate
Degree of Protection	IP – 65 (IEC - 60529)

MODEL 1031/1031H/ 1031HX



### Hybrid Models Specification

Embedded Pt100 sensor	Up to 2 Sensors as per IEC 60751-1985/DIN 43760
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### Optional Spec

Temperature Range	0-160°C other range on request
Switch Configuration	Change over Contacts / Normally Close Contacts
Thermometer Pocket	On request
Connector Type	½" / ¾" / 1" BSP M/F Brass / Aluminum Alloy

### Remote Indicator Options

Dial Type Thermometer Models	Suitable Digital Remote Indicator Models	Remote Indicator Signal Inputs
1031H Built in PT -100 Sensor	Model 2245	Suitable for 4 - 20mA input

**Note:** Refer Ordering information for various types of remote indicators

### Extranal CCU with PSU\*

Signal Input : PT 100 RTD, Simplex 3 wire
Auxiliary Supply : 90- 260V AC/DC
Signal Outputs : 2 Nos of 4- 20mA DC corresponding to temperature range
Burden on Output Signal : 600 Ohms maximum including loop Resistance
Accuracy of Signal Output : $\pm 1\%$ of F.S.D
Degree of protection of enclosure IP-40 & IP-10 for Terminals
Casing ABS Din rail Mounting or Screw fixing



### 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 External CCU with PSU (4-20 mA)
Signal output	Refer table below (Remote Indicator Output Options)
Power Consumption	5 Watts



Remote Indicator 96 Sq

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

1. Standard (1031)
2. Hybrid and External CCU with PSU (1031H + CCU with PSU)
3. Hybrid & External CCU with PSU + Remote Indicator (1031H + CCU with PSU + Remote Indicator)
4. Hybrid & 2 External CCU with PSU + Remote Indicator (1031HX + 2CCU with PSU + Remote Indicator)

### Routine and Type Tests Conducted

- 1 Routine test : HV Test and IR Test and Calibration Test
- 2 Protection class: IP65 as per IEC 60529
- 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) 5A @ 250V AC & 0.5A @ 250V DC

### Basic Ordering Information

Select Your Model	<ul style="list-style-type: none"> <li>• Standard -1031</li> <li>• with 1 inbuilt PT 100 Sensor (Simplex) - 1031H</li> <li>• with 2 inbuilt PT 100 Sensor (duplex) - 1031HX</li> </ul>
Switch Contact Rating	Standard Micro Switch
Type of Instrument	OTI/WTI
Range	R1.0 - 150°C R2.0 - 160°C (other ranges on request)
No. of Switches	S2 -2switches
Switch Configuration	L- Normally open contact L2 - Changeover contact L3 - Normally Close contact
Capillary Length	C1 - 1mts C2 2mts.....upto C10 - 10mtrs
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 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:

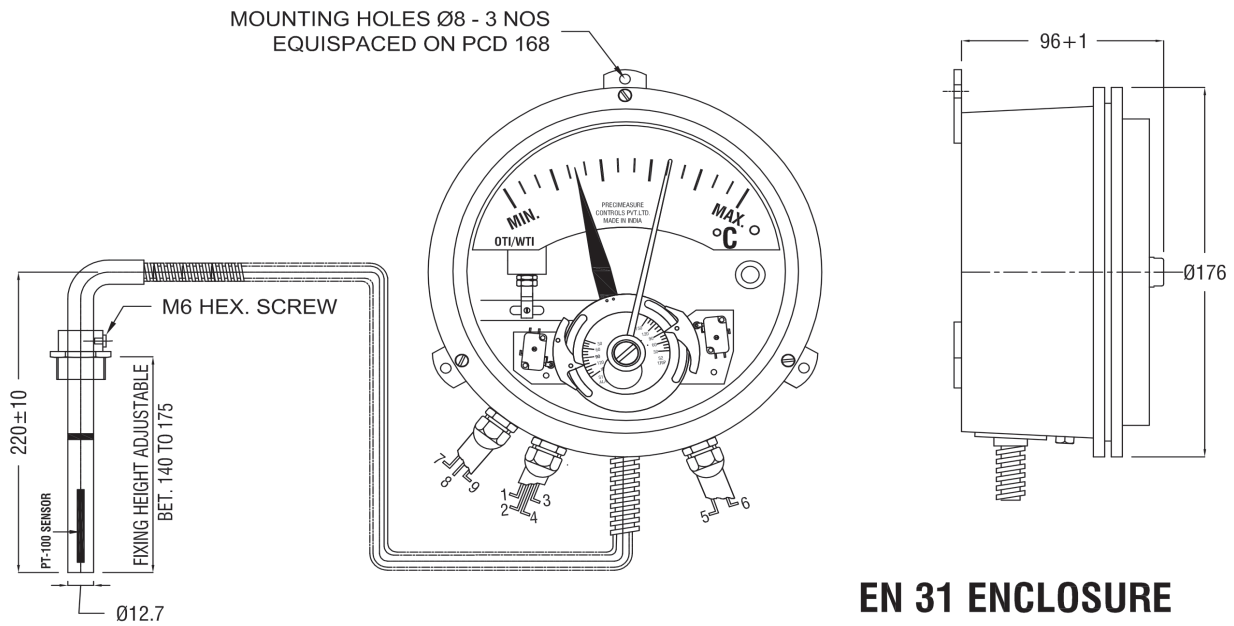
Remote Indicator	Options T1 - Indication only. T2 - 2Nos, 4-20mA DC outputs. T3 - one 4-20mA DC output + 2Nos. Change over relay contacts T4 - one 4-20mA DC output + RS 485 Modbus RTU protocol T5 - 4Nos. of 4-20mA DC outputs.
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**Note:** 1) WTI Gradient calibration is factory set as per customer specification. If required, a provision is made for small adjustment at site. 2) Extranal CCU and Remote Indicator is Part of the scheme.

Sample Ordering Information : 1031H\WTI\R1\S2\L\C3\U2\RI-T3\..... Amps .....0C

Disclaimer : Precimeasure reserves the right to make any changes in the specification without prior notice.

# OVERALL DIMENSION DIAGRAM



## EN 31 ENCLOSURE

