Easytemp TMR31
Compact thermometer

Compact, fast and precise for the measurement of process temperatures in common industries

Benefits:
- Small, compact design made entirely of stainless steel
- Extremely short response times
- Highly accurate even with short insertion lengths
- 4-wire, Pt100 or PC-programmable transmitter with 4 to 20 mA output
- Configuration and visualization with ReadWin® 2000 PC operating software, which is free of charge
- Breakdown information in event of sensor break or sensor short-circuit, adjustable as per NAMUR NE43
- Marine approval

Specs at a glance
- **Accuracy** class A acc. to IEC 60751
- **Response time** \( t_{50} = 1 \text{ s} \) \( t_{90} = 2 \text{ s} \)
- **Max. process pressure (static)** at 20 °C: 100 bar (1.450 psi)
- **Operating temperature range** PT 100: -50 °C ...200 °C (-58 °F ...392 °F)
- **Max. immersion length on request** up to 600,00 mm (23,62")

Field of application: With cost efficiency, optimal use of space, reliable operation, easy installation and commissioning the TMR31 fulfills the requirements of modern process measurement technology. Vibration-proof integrated thin-film sensors guarantee highest operational safety at the fastest response times.

Features and specifications
**Thermometer**

**Measuring principle**
Resistance Temperature Detector

**Characteristic / Application**
- metric style
- compact temperature probe
- fast response time
- threaded process connection
- with or without neck

**Thermowell / protection tube**
- without (not intended to use with thermowell)

**Insert / probe**
- pipe version, isolated wires, not flexible

**Outer diameter protection tube / Insert**
- 4,00 mm (0,16“)
- 6,00 mm (0,24“)

**Max. immersion length on request**
- up to 600,00 mm (23,62“)

**Material protection tube/ thermowell**
- 1.4404 (316L)

**Process connection**
- male thread:
  - G1/4"
  - G1/2"
  - NPT1/4"
  - NPT1/2"
  - M14x1.5
  - M18x1.5
  - BSPT R1/2"

**Tip shape**
- straight
**Thermometer**

**Surface roughness Ra**
0.8 μm (32 μin.)

**Operating temperature range**
PT 100:
-50 °C ...200 °C
(-58 °F ...392 °F)

**Max. process pressure (static)**
at 20 °C: 100 bar (1,450 psi)

**Accuracy**
class A acc. to IEC 60751

**Response time**
t50 = 1 s
t90 = 2 s

**Integration head transmitter**
no (4...20mA Signal)

**Certification**
Marine approval
UL 3111-1

More information [www.us.endress.com/TMR31](http://www.us.endress.com/TMR31)