**Model 9540**

**Digital Platinum Resistance Thermometer**

**PRECISION IN A MICRO PROCESSOR BASED INSTRUMENT**

Guildline Model 9540 has made hi-accuracy temperature measurement affordable. The 9540 delivers precision in a micro processor based instrument which is equally at home in the lab or on the production line.

The model 9540 provides a measurement range of –180 °C to +240 °C, variable recorder zero set for any temperature over it’s range and an integral dedicated probe which is matched to the instruments electronics. Hi-precision temperature measurement at affordable prices… Guildline doesn’t just measure standards, they set them.

Automatic power-up self test diagnostic indicates circuit malfunctions for both analog and digital circuits.

The temperature probe fits conviently into the lower portion of the instrument case.

**9540 FEATURES**

- IEEE 488 Interface
- Wide temperature measurement range in both °C and °F
- Variable zero set for recorder output providing full width hi-resolution analog recording
- Hi-resolution temperature display to 0.001 °C and °F
- Micro processor based design
- Dedicated integral probe
- Automatic power-up self test diagnostic
- Rack mounting kit available

**9540 is extremely easy to use with the integral temperature probe and the direct temperature reading in either °C or °F**

Of rugged stainless steel construction, the sensing temperature probe of 9540 is hermetically sealed and its connecting leads are waterproof.

The instrument is capable of either a continuous measurement/update mode, or a single sample can be measured and held with the press of a button.
### 9540 Specifications

**Temperature - Accuracy: Guaranteed Performance including supplied probe**

<table>
<thead>
<tr>
<th>Range 9540</th>
<th>Resolution deg °C or °F</th>
<th>9540 Limits of Error ± °C</th>
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<tbody>
<tr>
<td>+180 °C to +240 °C (+356 °F to +464 °F)</td>
<td>0.001</td>
<td>24 hrs. @ 23 °C ± 1 °C: 0.01 + 0.001/°C, 0.03 + 0.001/°C, 0.05 + 0.001/°C</td>
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<tr>
<td>-40 °C to +180 °C (-40 °F to +356 °F)</td>
<td>0.01</td>
<td>90 days @ 23 °C ± 5 °C: 0.015 ± 0.002/°C, 0.03 ± 0.002/°C</td>
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<tr>
<td>-40 °C to –100 °C (-40 °F to –148 °F)</td>
<td>0.01 + 0.002/°C, 0.015 + 0.002/°C, 0.03 + 0.002/°C</td>
<td></td>
</tr>
<tr>
<td>-100 °C to –150 °C (-148 °F to –292 °F)</td>
<td>0.13 + 0.02/°C, 0.135 + 0.02/°C, 0.15 + 0.02/°C</td>
<td></td>
</tr>
</tbody>
</table>

Total guaranteed performance is worst case. It assumes all contributing errors are maximum and occur at the same time and in the same direction. Contributing errors include calibration uncertainty which is referred to flowing water at the rate of 1 m/s, repeatability, stability, temperature coefficient, linearization plus sensor and electronics drift and probe self heating.

**Temperature coefficient:** < ± 0.0005 deg. C./°C, < ± 0.0009 deg. F./°F.

**Repeatability:** ± 2 least significant digits

**Warm up time:** 30 seconds to full rated accuracy

**Time constant:** 5 seconds

**Self Heating:** < 0.015 °C at 23 °C in flowing water at 1 m/s

**Filter:** 10 sec. digital filter

**Speed:** 1 sec. per reading, filter out

### 9540 Ordering Information

- 9540 Thermometer
- OM9540 Operating Manual (included)
- SM 9540 Service Manual (included)
- Certificate of Calibration (included)
- Report of Calibration (extra charge)

### General Specifications

- **Power Supply:** 95 to 130V or 190 to 290V, 50, 60, or 400 Hz < 10VA
  - Protection: Fused line 200mA time delay
- **Environment:**
  - Operating: 0 to 50 °C, < 70% RH non-condensing
  - Storage: -30 °C to 70 °C
- **Shock and Vibration:** 1 g in 3 planes, resonance search 5 Hz to 200 Hz
- **Exterior Dimensions:**
  - H 88mm (3.46 in)
  - W 228mm (8.98 in)
  - D 278mm (10.94 in)
- **Sensor Dimensions:**
  - Length: 159mm (6.25 in)
  - Diameter: 3mm (0.12 in)
  - Immersion Depth: 77mm (3 in)
  - Cable Length: 2.4m (94 in)
- **Encapsulation:** Stainless steel
- **Weight:** 3 KG (6.6 lbs)

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