

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 $+240^{\circ}\text{C}$, 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 conveniently into the lower portion of the instrument case.

9540 is extremely easy to use with the integral temperature probe and the direct temperature reading in either $^{\circ}\text{C}$ or $^{\circ}\text{F}$

9540 FEATURES

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

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 DIGITAL PLATINUM RESISTANCE THERMOMETER

9540 SPECIFICATIONS

Temperature - Accuracy: Guaranteed Performance including supplied probe

Range 9540	Resolution deg °C or °F	9540 Limits of Error ± °C		
		24 hrs. @ 23 °C ± 1 °C	90 days @ 23 °C ± 5 °C	1 Year @ 23 °C ± 5 °C
+180 °C to +240 °C (+356 °F to +464 °F)	0.001	0.01 + 0.001/°C	0.03 + 0.001/°C	0.05 + 0.001/°C
-40 °C to +180 °C (-40 °F to +356 °F)		0.01	0.015	0.03
-40 °C to -100 °C (-40 °F to -148 °F)		0.01 + 0.002/°C	0.015 + 0.002/°C	0.03 + 0.002/°C
-100 °C to -150 °C (-148 °F to -292 °F)		0.13 + 0.02/°C	0.135 + 0.02/°C	0.15 + 0.02/°C

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

INTERFACE – built in as standard

Protocol and connection: IEEE 488 (1978)
Provides full talker/listener facilities
and remote control of all functions.
Subset: SH1, AH1, T5, TE0, L3, LE0, SR1, RL1, PP2, DC1, CO

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 Voltage 95 to 130V or 190 to 290V
Frequency 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)

GUILDLINE IS DISTRIBUTED BY:

Guildline Instruments Limited

P.O. Box 99
21 Gilroy Street
Smiths Falls, Ontario Canada K7A 4S9
Phone: (613) 283-3000
FAX: (613) 283-6082
Web: www.guildline.ca