







Product Specification (PS)
Cole-Parmer Digi-Sense Thermometer
with NIST-Traceable Calibration & Accessories

1. Product Information

Product Name	GEX Product Number
Digi-Sense Digital Thermometer (single input with T-type probe) with NIST-Traceable Calibration	P4901
Cole-Parmer Compact Thermocouple Probe, Type K	N/A
NIST-traceable calibration report with data supplied by InnoCal	N/A
9 Volt battery, Carry Case, User Manual (one each)	N/A
Accessories (Included with product)	
T-Type Thermocouple B3 Probe	P4902
Digi-Sense Coiled Extension Cable, Type K, Male to Male Mini-Connector	P4904

2. Product Description

- 2.1 P4901 Cole-Parmer Digi-Sense Single-Input Thermocouple Thermometer and K-Type Thermocouple Probe and NIST-traceable calibration report with data supplied by InnoCal.
- 2.2 Product includes accessories:
- 2.2.1 T-Type Thermocouple B3 Probe (P4902)
- 2.2.2 K-Type Connector cable (P4904)

P4901 Digi-Sense Digital Thermometer	P4901 Cole-Parmer Compact Thermocouple Probe, K Type	P4902 T-Type Thermocouple B3 Probe	P4904 Thermocouple Coiled Extension Cable, Type K, Male to Male Mini Connector
			



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3. Intended Use

3.1 P4901 Product: The P4901 Digital Thermometer and accessories are used to verify the temperature of the Micro-Incubator temperature controller as well as measure temperature inside the slots of the heat block.

3.2 Accessories (Included with product):

3.2.1 T-Type Thermocouple B3 Probe (P4902) – The B3 probe is designed to fit into the heat block well and mimics a B3 dosimeter. Provides temperature measurements within the wells of the aluminum block of the Micro-Incubator.

3.2.2 K-Type Connector cable (P4904) – Connects the thermometer to the internal thermocouple probe of the Micro-Incubator. Provides a way to verify the temperature of the incubator heat block.

4. Product Specifications

4.1 This section contains a table of technical specifications for the product (P4901, Digi-Sense Digital Thermometer).

DIGITAL THERMOMETER (P/N: P4901)	Digi-Sense Digital Thermometer
Meter Measurement Type	Thermocouple
Types Of Probes Accepted	J, K, T, R, S
Number Of Probe Channels	1
Probe included	Yes. General-purpose Type K thermocouple probe.
Display	Large, dual, backlit LCD
Min Temperature (°F)	-328
Max Temperature (°F)	2501
Min Temperature (°C)	-200
Max Temperature (°C)	1372
Temperature Resolution	0.1°F (0.1°C) from 148 to 1832°F, (-99.9 to 999.9°C); 1°F (1°C) outside range
Accuracy	±1% of reading + 1.8°F (1°C) below -148°F (-99.9°C); ±1% of reading + 0.9°F (0.5°C) above -148°F (-99.9°C)
Power Source	One 9-Volt DC battery (included)
Data Logging	No



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Low Battery Indicator	Yes
Manufactured by	Cole-Parmer
Compliance	CE, WEEE
Calibration certificate by	InnoCal. (See <i>Calibration.</i>)
ACCESSORY (P/N: P4902)	T-Type Thermocouple B3 Probe
Temperature sensor type	Type T thermocouple
Thermocouple accuracy	The standard limit of error is $\pm 1^{\circ}\text{C}$ or $\pm 0.75\%$ whichever is greater. Special limit of error (above 0°C) is $\pm 0.5^{\circ}\text{C}$ or 0.4% whichever value is greater.
Materials	B3 dosimeter 30 AWG (0.010 in Dia) PFA coated thermocouple wire Upper pad: Fiberglass cloth Lower pad: High Performance Polyimide Film Adhesive backing: Silicone Primer
Max Temperature	Up to 177°C
Length (approx.)	1 m (40 in)
Manufactured by	Assembled by GEX. Thermocouple manufactured by Omega
Compliance	RoHS 2025/863: Compliant
Calibration	None (See <i>Calibration.</i>)
ACCESSORY (P/N: P4904)	Digi-Sense Coiled Extension Cable
Description	Coiled wire cable with type K connector. Male to Male Mini-Connector, 5 ft Length
Max Temperature	Up to 221°C
Length (approx.)	5 Ft. (1.5 meters)
Manufactured by	Cole-Parmer
Compliance	CE, WEEE

5. Receiving the Product

Carefully unpack the instrument and accessories from the shipping package. Check individual parts against the list of items in the product description section and cross reference with the images below. If anything is missing or damaged, contact GEX Customer Support immediately.



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Item Number	Description
#1	P4901 - Cole-Parmer Single-Input Thermometer
#2	Carrying Case (Black)
#3	User Manual
#4	INNOCAL Calibration Report
#5	9 Volt Battery
#6	Cole-Parmer Compact Thermocouple Probe, 4.5"L, Grounded; Type K
#7	P4904 – DigiSense Thermocouple Cable
#8	P4902 – T-Type Thermocouple B3 Probe

6. Storage

- Storage temperature is 14 to 122°F (-10 to 50°C) non-condensing
- Remove the battery if you do not intend to use thermometer for a long time.

7. Usage

For usage instructions, see *Cole-Parmer User Manual - Single-Input Thermometers* (see References - Published by Cole-Parmer)



CAUTION

Always use the correct thermocouple type with the appropriate Thermocouple Input Function setting on the P4901 Thermometer (example, use the T-Type probe with the T-type input setting). Mixed-mode usage will result in temperature measurement bias.



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8. Preventative Maintenance, Cleaning

Battery Replacement

- The low-battery icon will appear on the screen when the battery power falls low.
- Replace the single 9-volt battery by removing the screw holding the rear battery compartment cover to access the battery compartment.
- Ensure that the compartment cover is securely fastened when finished.

Cleaning

- The meter should be cleaned with a damp cloth and mild detergent when necessary. Do not use solvents or abrasives.

9. Safety Considerations / Precautions

- **P4901 Thermometer: CE Mark:** The P4901 product meets EU safety, health and environmental protection requirements. **WEEE:** The P4901 product meets WEEE directive 2012/19/EU.
- **P4902 T-Type Thermocouple B3 Probe:** Compliant with **RoHS 2025/863**.

10. Calibration

10.1. P4901 Thermometer and generic K-type probe

10.1.1. **The manufacturer issues a NIST-traceable calibration report with data supplied by InnoCal.** InnoCal is accredited to ISO/IEC 17025 by the American Association for Laboratory Accreditation (A2LA) under certificate number 1746.01.

10.1.2. **Recommended calibration due date:** 12 months from the date of purchase.

10.1.3. **Re-calibration** – Contact GEX to arrange re-calibration of the P4901 and K-Type probe through InnoCal.

10.1.4. **NOTE:** Calibration and certification are only for the GEX P4901 product (Digi-Sense Digital Thermometer and single K-type probe). **Does not include the P4902 T-type B3 probe.**

10.2. P4901 Thermometer and P4902 T-Type Thermocouple B3 Probe

10.2.1. User needs to determine calibration requirements, if necessary, for the P4902 T-Type Thermocouple B3 Probe. User can arrange calibration using an accredited third-party



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calibration laboratory. Or, contact GEX to arrange a calibration through an accredited third-party calibration laboratory.

11. Shipping / Delivery

Country of origin:	U.S.A.
Product Dimensions approx. (L x W x H):	9.0 in x 4.5 in x 2.5 in or (23cm x 11.5cm x 6.4cm)
Net Weight approx.:	1.2 lbs. (0.54 kg)
Shipping carton dimension approx. (L x W X H):	10 in x 10 in x 6 in or (25.4 cm x 25.4 cm x 15.3 cm)
Shipping carton gross weight approx.:	2 lbs. (0.9 kg)
Temperature Control during transportation:	None

12. Quality Assurance

- GEX's Quality Management System (QMS) is ISO 9001:2015 accredited. Download certificates and view more information at <https://www.gexcorp.com/quality.html>

13. Related Documents

DOC. ID	TITLE
HDWR-HEAT-PSS-1 (formerly 100-123)	Micro-Incubator Heat Treatment System with Timer (P4900). Published by GEX. https://library.gexcorp.com
1065DGMAN_20250-91, -93, -95, Rev. 3	User Manual - Single-Input Thermometers with NIST-Traceable Calibration. Published by Cole-Parmer. Manual Part No. 00100-21



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14. Revision History

DATE	CHANGE DESCRIPTION	REVISION
04/11/2025	Initial release. Transferred relevant information regarding the P4901 Digital Thermometer from GEX Doc# 100-125 into the new GEX PSS Document Template. ECO 75103	A

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Standard units are safety-approved and bear the test marks

