



INFRARED LASER DIGITAL THERMOMETER 30:1

MODEL NO: **VS942**

Thank you for purchasing a Sealey product. Manufactured to a high standard, this product will, if used according to these instructions, and properly maintained, give you years of trouble free performance.

IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS & CAUTIONS. USE THE PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. KEEP THESE INSTRUCTIONS SAFE FOR FUTURE USE.



Refer to instructions



Warning! Laser Beam

1. SAFETY

1.1. GENERAL SAFETY

- WARNING!** Ensure that Health & Safety, local authority and general workshop practice regulations are adhered to when using this equipment.
- WARNING! DO NOT** aim the laser beams at your or another person's or animal's eye and beware of reflections from mirrors or other shiny surfaces.
- ✓ Familiarise yourself with the applications, limitations, and potential hazards of the thermometer.
- ✓ Keep the thermometer clean and in good condition.
- ✓ Protect the thermometer from the following:
 - Electro-magnetic fields from engine components, arc welders and induction heaters closer than 125mm.
 - Static electricity.
 - Thermal shock caused by large and/or rapid ambient temperature change.
 - High temperatures.
- ✗ **DO NOT** get the thermometer wet or use in damp or wet locations or areas where there is condensation.
- ✗ **DO NOT** take readings through transparent materials such as glass or clear plastic. The surface temperature of these materials will be measured.
- ✗ **DO NOT** use the thermometer in areas where there is steam, dust or smoke. These conditions will result in erroneous readings.
- ✗ **DO NOT** use the thermometer for any purpose other than that for which it is designed.
- ✗ **DO NOT** allow untrained persons (particularly children) to operate the thermometer.
- ✗ **DO NOT** operate the thermometer when you are tired or under the influence of alcohol, drugs or intoxicating medication.

1.2. LASER SAFETY

The VS942 utilises a Class II laser that emits low levels of visible radiation (i.e. wavelengths between 400 and 700 nanometres) which are safe for the skin but not inherently safe for the eyes. The Class II emission limit is set at the maximum level for which eye protection is normally afforded by natural aversion responses to bright light. Accidental eye exposure is therefore normally safe, although the natural aversion response can be overridden by deliberately staring into the beam, and can also be influenced by the use of alcohol or drugs.

- WARNING! DO NOT** look or stare into the laser beam as permanent eye damage could result.
- ✓ Be aware that reflections of the laser beam from mirrors or other shiny surfaces can be as hazardous as direct eye exposure.

2. INTRODUCTION

High-resolution infrared sensor detects energy emissions and converts to precise temperature readings. Integrated dual laser pointer enables accurate aiming at the measurement surface. Large 55mm back-lit colour LCD screen ensures easy reading in low light environments. Temperature readings are available in both °C and °F. Temperature Range: -50°C to +1100°C (-58°F to +2012°F). Min/max, average, and emissivity modes support detailed diagnostics. Features include data-hold and data record, and high/low temperature alarm. Detachable K-type probe for accurate liquid temperature readings. Powered by a 9V battery (supplied). Low battery indicator and auto power-off to conserve battery life. Storage pouch included. Not medical grade.

3. SPECIFICATION

Model No	VS942
Accuracy	-50°C to -0°C; ±4°C, 0°C to +500°C; above 500°C ±2%°C
Focal Ratio	30:1
Nett Weight	0.376kg
Temperature Range	-50°C to +1100°C (-58°F to +2012°F)

4. CONTENTS

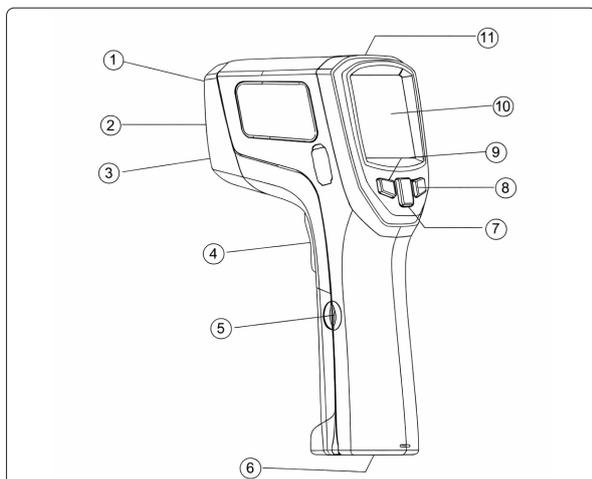
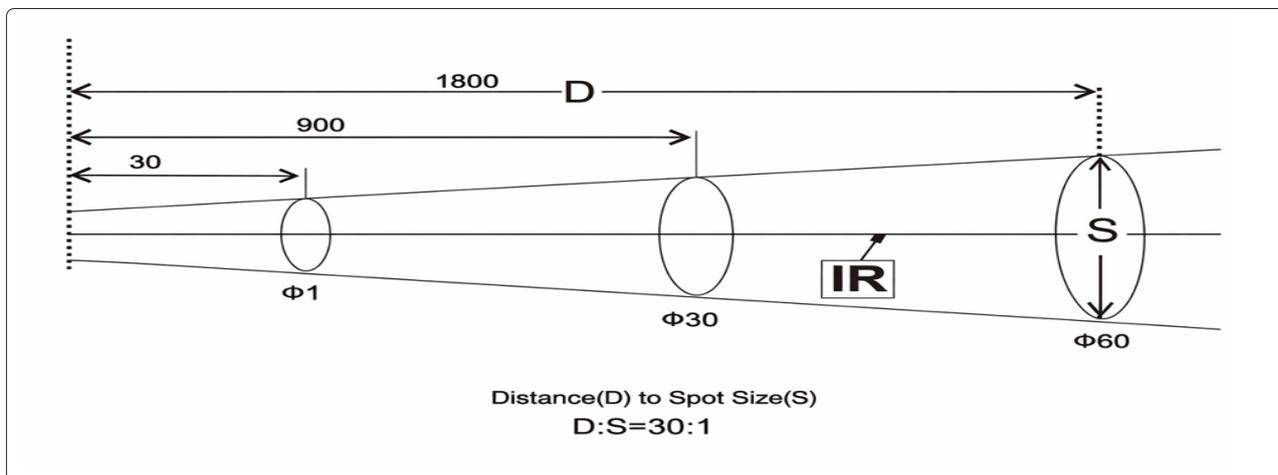
- User's manual
- 9V Battery
- Type-K probe
- Thermometer



TK Range	-50°C~1370°C/-58°F~2498°F
IR Range	-50°C~1100°C
	-58~2012°F
IR Accuracy	-50°C~0°C/-58°F~32°F; ±4.0°C/7.2°F
	0°C~500°C/32°F~932°F; ±1.5% of reading±2.0°C/3.6°F
	>500°C/932°F; ±2.0% of reading ±2.0°C/3.6°F
TK Accuracy	-50°C~1370°C/-58°C~2498°F;±1.5% or ±1.0°C/1.8°F
Optical Resolution	30 :1
Emissivity	Adjustable 0.10~1.0
Resolution	0.1°C(0.1°F)<1000 ,1°C(1°F) >1000
Response Time	<250 ms
Spectral Response	8~14um
REC memory	99 Groups data recording
Diode Laser	Output<1mW, 630~670nm, class 2(11)
Automatic Power Off	Meter shuts off automatically after 25 seconds inactivity
Operating Temp.	0°C~50°C/-32°F~122°F
Storage Temp.	-20°C~60°C/-4°F~140°F
Relative Humidity	Operating 10~90%RH;Storage:<80%RH
Power Supply	6F22 9V battery
Dimensions	198*120*59mm
Safety	"CE" Comply with EMC

5. OPTICAL FIELD

The meter's field of view is 30:1, for example, if the meter is 76.2 cm from the target spot, the diameter of the target must be at least 2.54cm. Other distance ratios are show below in the field of view diagram.

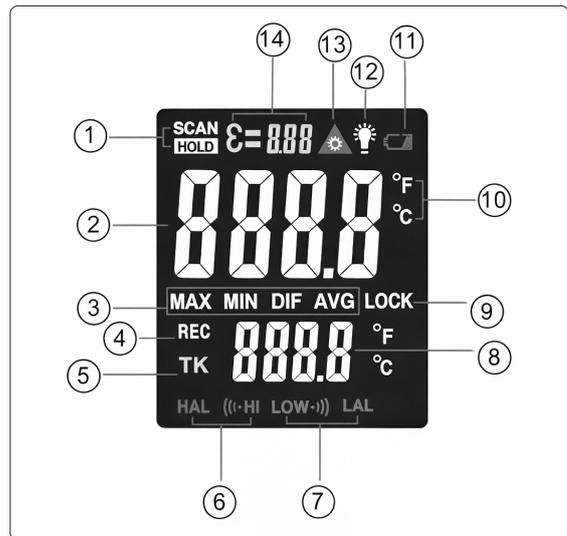


1	Laser pointer
2	IR sensor
3	Laser pointer
4	Measurement trigger
5	Battery cover
6	Tripod nut
7	Up/down button
8	Laser button
9	SET button
10	LCD Display
11	K-type probe interface

6. OPERATION

6.1. LCD DISPLAY

1	Measurement icon, data hold icon
2	Current temperature values
3	Icon for Max, Min, Dif, Avg
4	Data record icon
5	Type-K temperature icon
6	High alarm icon
7	Low alarm icon
8	Temp. values for the Max, Min, Dif, Avg, Hal, Lal. and Rec
9	Trigger Lock
10	°C / °F icon
11	Low battery Icon
12	Backlit icon
13	Laser icon
14	Emissivity Icon



6.2. OPERATING STEPS:

6.2.1. AIM THE INSTRUMENT

Grasp the meter by the handle and orient the sensor toward the target surface.

6.3. INITIATE MEASUREMENT

Squeeze and hold the trigger to power on the device. The "SCAN" indicator will illuminate, signifying active measurement.

6.4. TEMPERATURE DISPLAY

The measured surface temperature will appear on the LCD in real time during the scan.

6.5. HOLD READING

Release the trigger to end the measurement. The "HOLD" indicator will activate, retaining the last measured value for several seconds.

6.6. AUTO POWER-OFF

The instrument will automatically shut down approximately 25 seconds after the trigger is released.

6.7. THERMAL STABILIZATION:

When the meter is moved into an environment with a significantly different ambient temperature, allow at least 30 minutes for the device to thermally stabilize before performing measurements.

6.8. LASER AIMING:

The laser is intended solely for targeting. It may be disabled during short-range measurements to conserve battery power.

6.9. BUTTON FUNCTIONS

6.10. While in Measurement Mode, use the  button to change the temperature unit to either °C or °F.

6.11. In REC Mode, press the Record Review  button to browse the latest 99 stored readings.

6.12. In SCAN Mode, press the Laser button  to turn the laser pointer ON or OFF.

After powering on the meter, press and hold the Lock button for 3 seconds to lock the device in SCAN Mode. The LOCK icon will appear on the LCD.

6.13. After powering on the meter, press the  Function button to cycle through MAX, MIN, AVG, DIF, REC, High/Low alarm values, and TK readings.

6.14. After powering on the meter, press and hold the  Function button for 3 seconds until the emissivity  icon flashes. Release the button  to enter Emissivity Mode.

6.15. Press the Function button to adjust the emissivity value. Press and hold the button again to return to normal measurement mode.

While in Emissivity Mode, press the Mode button once  to select High/Low alarms,  then use the Function button to set the alarm value.

6.16. BATTERY REPLACEMENT

When the low-battery indicator  appears on the display, replace the battery promptly to ensure accurate operation. (see LCD display item 11).

6.16.1. Open the battery compartment, replace the existing battery with a new 9V battery, and securely close the battery compartment cover (Location listed at start of operation).

6.17. INFRARED THERMOMETER OPERATING PRINCIPLES AND GUIDELINES

6.17.1. The infrared thermometer is designed exclusively for measuring surface temperatures of objects.

6.17.2. The optical sensor emits, reflects, and transmits infrared energy. This energy is collected and focused onto a detector, where it is converted into an electronic signal and displayed as temperature on the LCD screen.

6.17.3. The integrated laser serves only as an aiming aid to help identify the target location.

6.18. FIELD OF VIEW (FOV)

- 6.18.1. The target surface must be larger than the measurement spot size defined by the field-of-view ratio.
- 6.18.2. For smaller targets, the thermometer must be positioned closer to ensure accurate measurement.
- 6.18.3. When high accuracy is required, the target area should be at least twice the diameter of the measurement spot.

6.19. DISTANCE-TO-SPOT SIZE RATIO (D:S)

- 6.19.1. As the distance (D) from the target increases, the measurement spot size (S) expands accordingly.
- 6.19.2. Users should maintain an appropriate distance to ensure the spot size does not exceed the target area.

6.19.3. LOCATING HOT SPOTS

- 6.19.4. To identify a temperature anomaly, aim the thermometer outside the suspected area and scan across it in a vertical and horizontal pattern.
- 6.19.5. Observe the readings while sweeping to pinpoint the highest temperature zone.

NOTES:

Measurement of shiny or polished metal surfaces (e.g., stainless steel, aluminium) is not recommended due to low emissivity and reflective properties.

- ✘ **DO NOT** attempt to measure temperature through transparent materials, such as glass, as readings will not be accurate.
- ✓ If the target surface is contaminated with frost, oil, dust, or other residues, clean it prior to measurement.

7. MAINTENANCE

- ✓ Clean the unit with a dry, soft cloth. Do not use solvents, alcohol, or other volatile cleaning agents.
- ✓ Store the thermometer in an environment free from high temperature and humidity.
- ✘ **DO NOT** disassemble the device. Repairs should be performed only by qualified personnel.
- ✘ **DO NOT** immerse the device in water or expose it to excessive moisture.

8. END OF LIFE

When the product is no longer in service, it should be safely dismantled. Components must be carefully removed and sorted for recycling, reuse, or disposal in accordance with safety and environmental regulations, ensuring that all parts are handled responsibly and any hazardous materials are managed appropriately.



ENVIRONMENT PROTECTION

Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment. When the product becomes completely unserviceable and requires disposal, drain any fluids (if applicable) into approved containers and dispose of the product and fluids according to local regulations.



REGISTER YOUR PURCHASE HERE



WEEE REGULATIONS

Dispose of this product at the end of its working life in compliance with the EU Directive on Waste Electrical and Electronic Equipment (WEEE). When the product is no longer required, it must be disposed of in an environmentally protective way. Contact your local solid waste authority for recycling information.



BATTERY REMOVAL SEE SECTION 6.17

Under the Waste Batteries and Accumulators Regulations 2009, Jack Sealey Ltd are required to inform potential purchasers of products containing batteries (as defined within these regulations), that they are registered with Valpak's registered compliance scheme. Jack Sealey Ltd Batteries Producer Registration Number (BPRN) is BPRN00705.

Note: It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice.

Important: No Liability is accepted for incorrect use of this product.

Warranty: Guarantee is 12 months from purchase date, proof of which is required for any claim.

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