

Tempsee

Infra Thermometers

User Manual



ABUS TECHNOLOGIES INC.

WARNING

- ❖ This manual should be passed on to the end user.
- ❖ The contents of this manual are subject to change without prior notice.
- ❖ All rights reserved.
- ❖ ABUS gives no warranty of any kind with regard to this manual, including, but not limited to, fitness for a particular purpose.
- ❖ If any question arises or errors are found, or if any information is missing from this manual, please inform your supplier or inform at info@abustek.com.
- ❖ The specifications mentioned in this manual are limited to those for the standard type under the specified model number break-down and do not necessarily apply for customized instruments.
- ❖ Please note that changes in the specifications, construction, or component parts of the instrument may not immediately be reflected in this manual at the time of change.
- ❖ If the customer or any third party is harmed by the use of this product, ABUS assumes no responsibility for any such harm owing to any defects in the product which were not predictable, or for any indirect damages.

Although Warning hazards are related to personal injury, and Caution hazards are associated with equipment or property damage, it must be understood that operation of damaged equipment could, under certain operational conditions, result in degraded process system performance leading to personal injury or death. Therefore, comply fully with all Warning and Caution notices.

Information in this manual is intended only to assist our customers in the efficient operation of our equipment. Use of this manual for any other purpose is specifically prohibited and its contents are not to be reproduced in full or part without prior approval of Technical Communications Department, ABUS Technologies

HEALTH AND SAFETY

To ensure that our products are safe and without risk to health, the following points must be noted:

1. The relevant sections of these instructions must be read carefully before proceeding.
2. Warning labels on containers and packages must be observed.
3. Installation, operation, maintenance and servicing must only be carried out by suitably trained personnel and in accordance with the information given. Any deviation from these instructions will transfer the complete liability to the user.
4. Normal safety precautions must be taken to avoid the possibility of an accident occurring when operating in conditions of high pressure and/or temperature.
5. Chemicals must be stored away from heat, protected from temperature extremes and powders kept dry. Normal safe handling procedures must be used.
6. When disposing of chemicals ensure that no two chemicals are mixed.

Safety advice concerning the use of the equipment described in this manual or any relevant hazard data sheets (where applicable) may be obtained from the Company address on the back cover, together with servicing and spares information..

CATALOGUE

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1. INTRODUCTION

Tempsee is the ultimate tool for temperature measurements. It contains 2 most reliable temperature sensors: *Non-contact Micro Machining Thermopile* and *K-type thermocouple socket*. Such an arrangement can fulfill most of temperature measurement requirements. Use the Non-contact for instant; not-reachable situation. Use the thermocouple for high precision; non-surface situation.

Tempsee also come with an ultra long battery life (8days for Alkaline battery), no 9V battery. It uses the most affordable and available AAA size battery. Learn Emissivity with the Tempsee: Emissivity is a difficult concept for general user to catch. But, with Tempsee, it's easy to get, just use the contact thermometer to get the true temperature. Then use the Non-contact to get the surface temperature, Adjust the Emissivity until they are the same.

2. PRESENTATION

2.1 Features

1. NIST traceable.
2. Certificate of Calibration Available (COC Optional).
3. IR-SoC technology (Infrared System on Chip) and Batch Calibration technology drive the dimensions and cost to the lowest limits.
4. New Low voltage technology, no more 9V battery.
5. D:S Ratio 12:1
6. Use the most affordable and available battery: AAA size, instead of the low capacity 9V battery.
7. Long Battery Life.

Note: With Laser and Backlit turned off

For Alkaline Battery (1150mAh): Typical 8days.

8. Large LCD Screen, with bright amber color Backlit
9. Friendly User Interface: 5-Key (with Emissivity Fool Proof Function)
10. With high-end arithmetic: Max;Min and DIF; AVG mode
11. Auto Power Off time is 15sec
12. Precision K type Thermocouple Thermometer available (optional)

2.2 Technical Parameters

Measuring Range:	-60 °C ~ 500 °C (-76 °F ~ 932 °F)
Accuracy:	±1.0 °C
Operating Temperature:	15 °C ~ 35 °C
Ambient Temperature:	25 °C
Distance / Spot Ratio:	12:1
Mode:	Ave, Dif, HiLow Alarm Max., Min., Lock

3. INSTALLATION

3.1 Packing Details

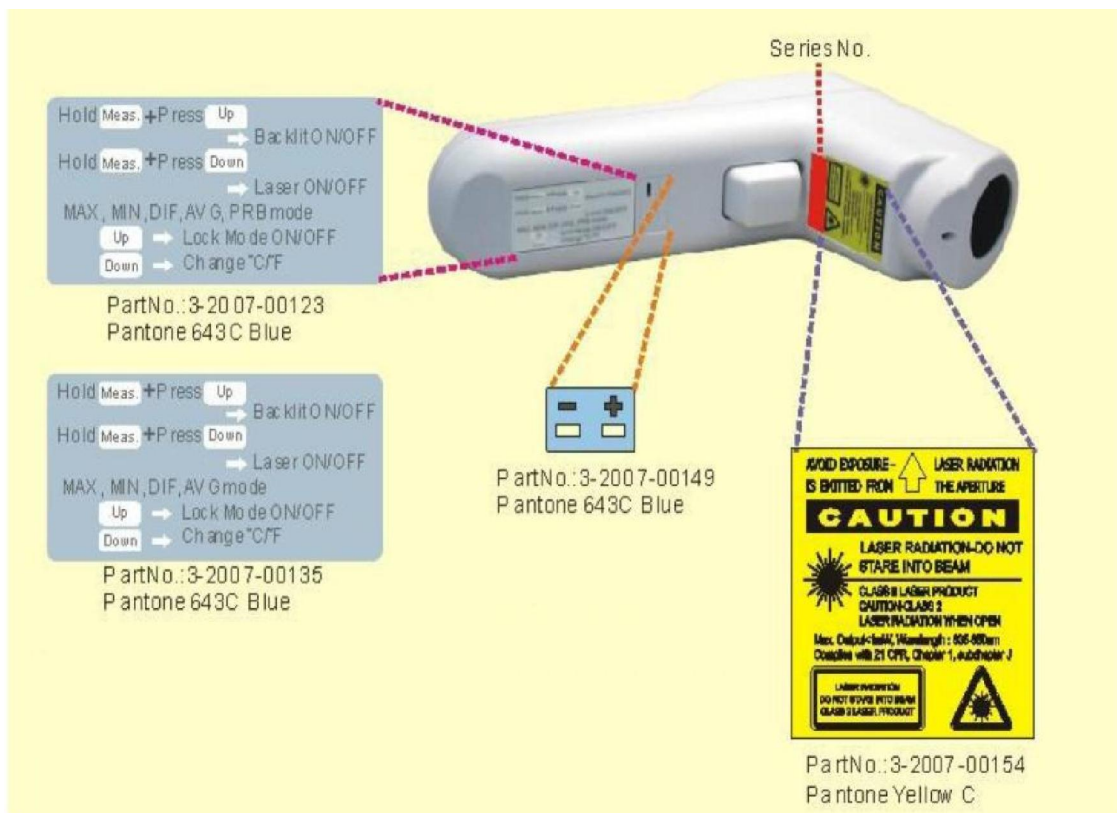


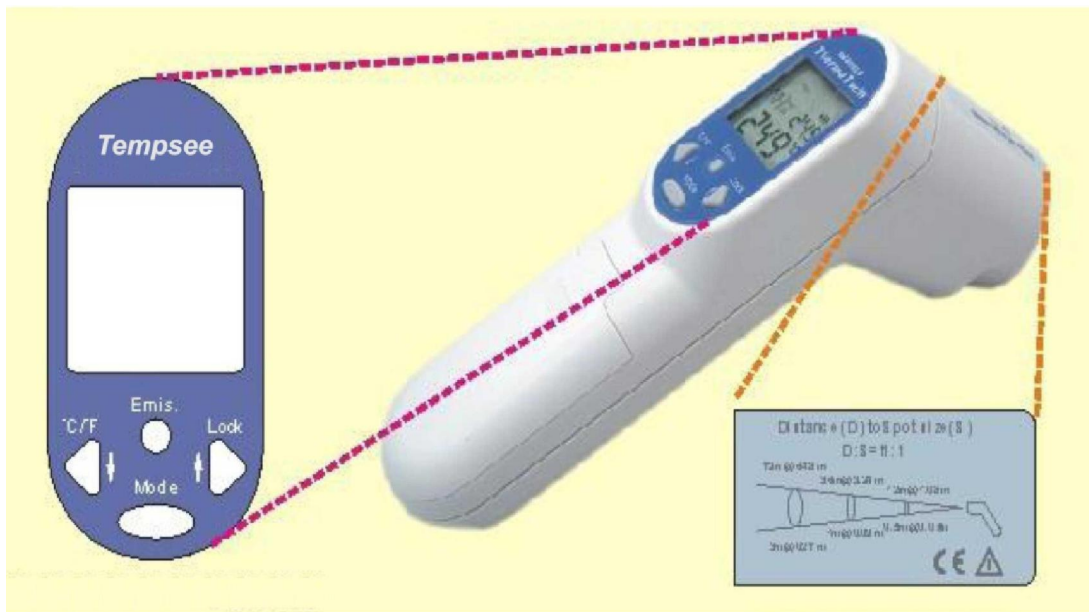
Packing

3.2 Panel



3.3 Part Details





4. OPERATION

Test Name: Infrared Thermometer (Laser thermometer) FOV Test / D: S Test. OUT: Tempsee, Lens=SM

Graph Based on:

Test Method: [v]see Tempsee.doc

Test Objective: [v] to approve the FOV meet spec

Reason of testing: [] to approve new process

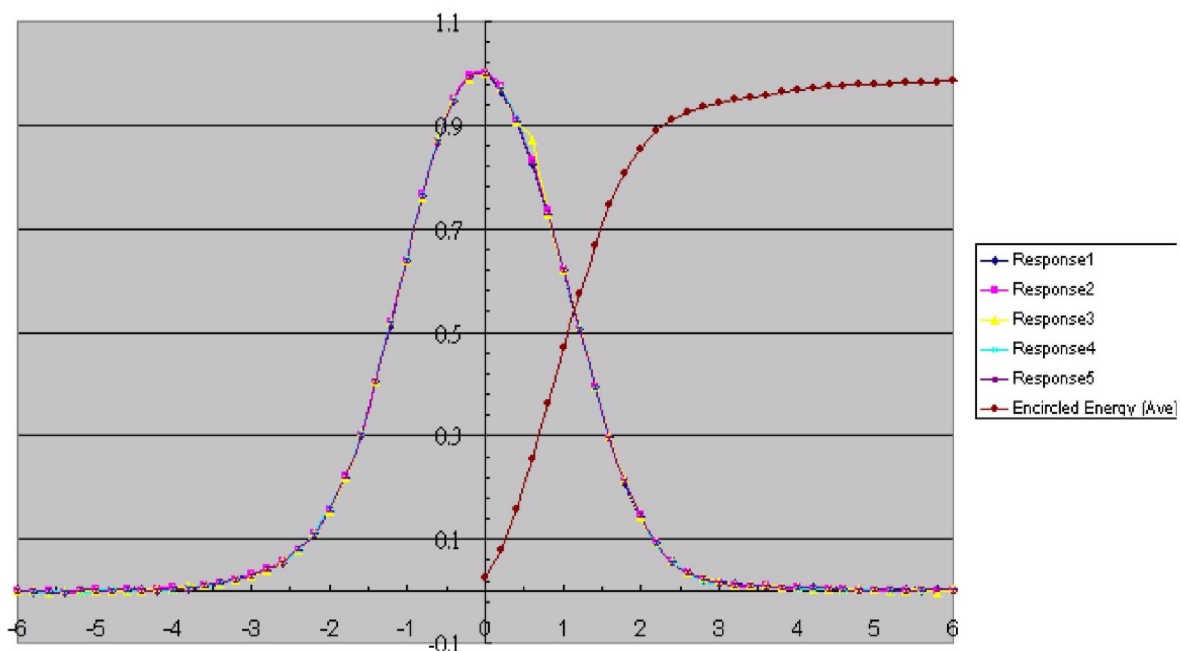
[v] to approve new part SM

Test Criteria: D:S >= 11:1 @ 1000mm

Test Conclusion: [v]Pass [] Fail [] Other

Test Result: FOVhalf [degree] = **2.33**

D:S = **12.32**



5. SAFETY PRECAUTIONS

1. The unit should be powered for 15 minutes before use.
2. Use in ambient temperature of 0-60°C.
3. Avoid vibrations, shock, excessive dust, corrosive chemical materials or gaseous environment.
4. Input wire should not be too long. If measured signal have to be far away from the unit, please use 2-core shielded cable.
5. Use this instrument in the scope of its specifications, otherwise fire or malfunctions may result.
6. Contact of the instrument, with organic solvents or oils should be avoided.
7. Do not turn on the power supply until all of the wiring is completed. Otherwise electrical shock, fire or malfunction may result.
8. Do not disassemble, repair or modify the instrument.
9. All connections should be tightened properly.
10. Power supply should be constant, should not be fluctuating.

6. WARRANTY

ABUS provides the original purchaser of this instrument a one (1) year warranty against defects in material and workmanship under the following terms:

- The one year warranty begins on the day of shipment as stated on the sales bill.
- During the warranty period all costs of material and labor will be free of charge provided that the instrument does not show any evidence of misuse.
- For maintenance, return the instrument with a copy of the sales bill to our factory.
- All transportation and insurance costs should be covered by the owner of the equipment.
- Should any sign of electrical or mechanical shock, abuse, bad handling or misuse be evident the warranty voids and maintenance costs will be charged.

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