

# ATFX410-1



## DIGITAL PROBE THERMOMETER

Product Code: ATFX410-1



Compliance with confidence

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## 1.0 INTRODUCTION

- 1.1 Congratulations on your purchase of your ATFX410-1 thermometer from Klipspringer. With considerate operation it should provide accurate and stable measurements for a long time to come.
- 1.2 The thermometer is robust, shockproof, IP67 rated and designed to fit comfortably into the hand.
- 1.3 The instrument electronics are controlled by a microprocessor ensuring high precision in measurement and linearity over the whole temperature range.
- 1.4 All temperature readings, fault detections, functions etc will display clearly on the large LCD screen.
- 1.5 A replaceable lithium battery provides approximately five years of reliable operation.

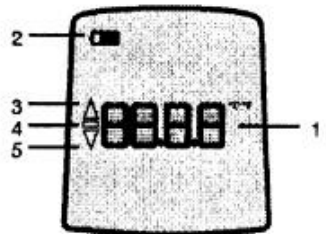
## 2.0 CAUTION

The thermometer must be protected from:

- 2.1 Electrostatic discharge
- 2.2 Thermal shock caused through sudden extreme ambient temperature changes. Allow instrument to stabilise for up to 30 seconds when affected or when moving into extreme changes in ambient temperatures.
- 2.3 Contact or close proximity to high heat sources.

## 3.0 OPERATION

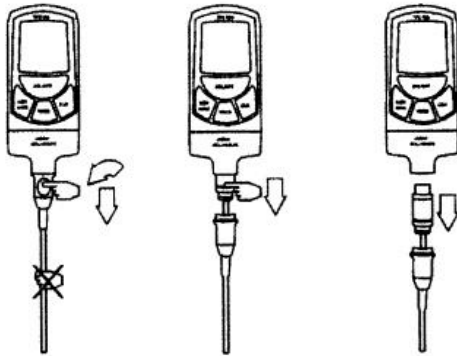
- 3.1 The default unit of measurement is degrees Celsius (°C). [Can be changed to Fahrenheit – please contact the Klipspringer support team.]
- 3.2 To switch ON press and hold the ON/OFF keypad for approximately one second. To switch OFF press and hold the ON/OFF keypad for approximately three seconds.
- 3.3 **LCD Display Test.** When the instrument is first switched on, all LCD segments will activate for approximately two seconds as a system test.
- 3.4 **Verification of accuracy.** Once all 4 LCD segments have displayed, the instrument will check its own accuracy through internal electronic temperature simulation. 5.0°C, then 65.0°C will display. This replicates the function of additional instrumentation (e.g. test caps).
- 3.5 Following the automatic electronics test, the temperature of the probe is displayed and the instrument is ready to use.



## 4.0 TEMPERATURE MEASUREMENT

- 4.1 Ensure that the thermometer probe is inserted to a preferred depth of 25mm into the medium and that contact is maintained until readings become stable.
- 4.2 Stability Indicator. Upward pointing triangle (see Section 3) to left of temperature, indicates rising trend, and downward pointing triangle indicates falling trend. When stable measurement is reached, no triangle will display and an accurate reading can be taken.
- 4.3 If error message displays, refer to Section 7.0.

## 5.0 CHANGING THE DETACHABLE PROBE

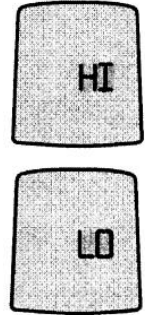


- 5.1 Hold probe cap (AEB60) on the recessed grips and turn 60° anti-clockwise (A). NB The beginning of turn will provide slight resistance.
- 5.2 Carefully pull probe cap downwards away from instrument. NB Never pull down on the flexible probe cable.
- 5.3 When exposed (B), pull downwards on the spring-loaded metal connector sheath to release connector from instrument socket (C). NB Do not attempt to twist off.
- 5.4 Carefully align and slide fresh probe connector into instrument socket until it feels securely engaged.

- 5.5 Slide the probe cap and sealing rubber grommet upwards to engage with instrument case and twist 60° clockwise until firmly attached. NB Red cap-seal must be in place and tight to ensure IP67 connection.

## 6.0 MALFUNCTION INDICATORS

- 6.1 6.1.1 'HI' display: temperature measured is above range.  
 6.1.2 'HI' display: an open circuit is detected in probe or cable
- 6.2 6.2.1 'LO' display: temperature measured in below range.  
 6.2.2 'LO' display: a short circuit is detected in probe or cable.
- 6.3 6.3.1 Three dashes display: probe disconnected or broken.
- 6.4 Contact our technical helpline if diagnosis is not clear.



## 7.0 BATTERIES

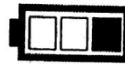
- 7.1 The lithium battery has an expected lifespan of up to five years allowing for two hours continuous use each day.
- 7.2 The battery symbols indicate power status.



Battery operational



Battery operational



Battery shortly exhausted



Battery needs to be replaced

- 7.3 For best results, return instrument to Klipspringer Service Centre for battery replacement and service check. NB Battery is welded into thermometer circuitry and is not suitable for 'diy' replacement.

## 8.0 TECHNICAL DATA

Measuring range	-50...+300°C
Accuracy	±0.3°C
Resolution	0.1°C

Operating range	-25...+50°C
Sampling rate	2 times per second
Protection class	IP67
Battery	Lithium coil cell 3V/1Ah type CR2477
Battery life	Approx. 5 years
Sensor type	Pt1000
Compatible probes	SPT series (exclusive to Klipspringer).
Auto power-off	2 hour delay
Dimensions	109x54x22mm
Weight	Approx. 90g excluding probe

## 9.0 FUNCTION MENU

9.1 To change any of the below please contact our technical team on +44 (0)1473 461 800 or [service@klipspringer.com](mailto:service@klipspringer.com).

9.1.1 °C / °F

9.1.2 auto 'off' / manual switching

9.1.3 measuring frequency (1 - 15 seconds).

## 10.0 ACCESSORIES

10.1 A comprehensive range of accessories is available to enhance the performance of your ATRFX410-1 thermometer and provide extra protection.



Protective  
Silicone Boot



Detachable  
SPT series  
probes



Probe change  
tool



Heavy duty  
carry case



Instrument  
stations

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## **11.0 SERVICE**

- 11.1 For service and repairs please send the unit to the address below in the box provided for your use. **DO NOT** attempt to open the case. The instrument contains delicate electronic components and opening the case may invalidate your warranty.

## **12.0 CLEANING**

- 12.1 Cleaning is best performed by wiping with a soft cloth and mild soap solution. Do not use solvents.

## **13.0 CALIBRATION**

- 13.1 In order to guarantee optimum precision, we recommend that this instrument should be calibrated each year.
- 13.2 Klipspringer will automatically notify you of the due date for calibration.
- 13.3 The thermometer will be returned within one week accompanied by a certificate of calibration.
- 13.4 Klipspringer is a UKAS accredited laboratory for temperature calibration (0764) in accordance with BS EN ISO/IEC 17025. This service is provided to cover almost any probe hand-held thermometer currently in use.

## **14.0 ASSURANCE**

- 14.1 With considerate use and Klipspringer's support, this unit will give years of accurate service.

