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MANUAL PIEPS 30° PLUS XT

ENGLISH

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1. Introduction

Dear winter sports enthusiast!

Congratulations on having purchased one of our products.

The PIEPS 30°PLUS XT is an electronic inclinometer for uncomplicated and accurate measurement of the slope gradient. Easy and safe to mount on any ski pole, it is a reliable tool for anyone who does not want to rely solely on estimations when evaluating slope gradients.

Practical applications:

- for simple and reliable determination of the slope gradient
 - as an assessment criterion for avalanche risk
 - for checking the estimated gradient (training)
 - for snow cover stability tests
- Temperature measurement: When mounted on a ski pole, the 30°PLUS XT always indicates the current outside temperature.

With the PIEPS 30°PLUS XT (hereinafter referred to as the 30°PLUS XT), you have a product that is state of the art in terms of safety and user-friendliness. Despite this, the 30°PLUS XT can pose risks if used inappropriately or incorrectly. We refer to possible hazards in chapter 2 and with safety notes placed throughout the operating manual.

This operating manual is intended to ensure the safe use of the 30°PLUS XT. The safety instructions in this document must be followed at all times.

Before you use the 30°PLUS XT, you must have read and understand this operating manual.

Pieps GmbH is not liable for technical or printing errors in this operating manual, neither is any liability accepted for damage caused directly or indirectly by the delivery, performance or use of this operating manual.

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Pieps GmbH, July 2017

1.1 Identification

The 30°PLUS XT is identified on the unit and on the packaging in accordance with applicable regulations.



Identification on the unit



Identification on the packaging

CE identification according to:

- EMV 2014/30/EU
- RoHS 2011/65/EU

1.2 Liability

The information contained in this operating manual describes but does not guarantee the features of the product.

No liability is accepted for damage caused by:

- Improper use
- Failure to follow the operating manual
- Unauthorized modifications of the 30°PLUS XT
- Improper work on and with the 30°PLUS XT
- Continuing to use the 30°PLUS XT despite evidence of wear and tear
- Unauthorized, improperly carried out repairs
- Emergencies, external influences or force majeure

NOTICE

Alterations or modifications not explicitly approved by the manufacturer will result in you no longer being allowed to use the unit.

1.3 Warranty conditions

The manufacturer provides a 2-year warranty covering manufacturing and material defects of the 30°PLUS XT from the date of purchase. Exceptions are the battery, carrier bag and any damage caused by improper use or dismantling of the unit by unauthorized persons. Any other warranties and liability for consequential damage are expressly excluded. For warranty claims, please take proof of purchase and a description of the fault to the point of sale.

1.4 Support

For technical problems, please contact the Pieps Support Team: support@pieps.com

1.5 Intended use

The 30°PLUS XT is an electronic inclinometer with temperature display. The unit should be used in practice situations to verify estimated slope gradients by means of measurements. The 30°PLUS XT can also be used for snow cover stability tests if the gradient of the test area is measured. The unit also has a temperature-measuring feature that displays the current air temperature. The unit is designed for fastening to the ski pole.

Avalanches can occur on slope gradients of less than 30°. Statistics show that the probability of an avalanche occurring is higher for slope gradients above 30°.

The unit must only be used as intended.

Any other use requires the written permission of Pieps GmbH. Improper use can put individuals at risk and result in the unit being damaged.

Failure to use the unit as intended will result in all liability and warranty claims being rejected. The 30°PLUS XT is to be operated only under the conditions of use described in the documentation.

1.6 Target group and previous knowledge

The 30°PLUS XT serves as a useful tool for everyone who wants to determine the slope gradient quickly and without fuss (e.g. ski tourers, freeriders, mountaineers, mountain rescue teams, etc.).

Users of the 30°PLUS XT must meet the following conditions:

- Read and understand this operating manual.
- Users with impaired vision must ensure that they can read the optical display and can correctly interpret the notes in the operating manual.

1.7 Operating limits

The operating limits of the 30°PLUS XT are defined as follows:

- Ambient temperature: Guaranteed for use between min. -20°C (-4°F) and max. +45°C (+113°F).

1.8 Essentials

The 30°PLUS XT meets the current state of technology and the applicable health and safety regulations. However, incorrect operation or misuse can give rise to hazards for:

- the life and health of the users or third parties
- The 30°PLUS XT and property of the operator
- The efficient use of the 30°PLUS XT

1.9 Technical data

Name	PIEPS 30°PLUS XT
Dimensions (LxWxH)	105 x 23 x 13 mm
Weight	40 g (incl. battery)
Power supply	1x lithium button battery CR1225, 3 V, 50 mAh
Battery life	Min. 1.000 measurements, 3 - 5 years
Operating temperature range	-20°C to +45°C (-4°F to +113°F)
Incline sensor range	0° to 90°, 3-dimensional, ±1° tolerance at 0°C (32°F)

2. Safety

This operating manual is structured in accordance with the applicable EU regulations and contains safety instructions. Each individual is personally responsible for complying with the safety instructions. This chapter contains all safety-related information.

Should anything be unclear or difficult to understand, please contact our support team.

2.1 Signal words used in the safety instructions

DANGER

Imminent threat to the life of individuals

A safety instruction with the signal word DANGER indicates an imminent threat to the life and health of individuals!

WARNING

Risk of personal injury (serious injuries) and possible material damage

A safety instruction with the signal word WARNING indicates a dangerous situation which could affect the health of individuals.

CAUTION

Risk of material damage and possible minor risk of injury

A safety instruction with the signal word CAUTION indicates a possibly dangerous situation, which could primarily result in material damage.

NOTICE

This symbol with the text NOTICE indicates supporting information for installation, operation or maintenance and repair.

2.2 General safety rules and obligations

The following safety rules and obligations apply in general for using the 30°PLUS XT:

- The 30°PLUS XT may only be used in a perfect condition.
- It is forbidden to alter or change the 30°PLUS XT without the written permission of Pieps GmbH.
- Do not attempt to rectify faults or damage without authorization. Instead, you must contact support, who will tell you how to proceed. The 30°PLUS XT must not be used until the damage has been rectified.
- The safety and operating instructions in the operating manual must be followed at all times.

2.3 Residual risks | Warnings

Even though the 30°PLUS XT has been designed with maximum care and all safety-related facts have been taken into consideration, residual risks may exist and must be evaluated by means of a risk assessment. All residual risks and warnings from the risk assessment are listed in this chapter.

⚠ DANGER ***Risk of electric shock when touching the unit with electrical conductors***
Keep a safe distance from energized conductors when installing/uninstalling or using the unit.

⚠ WARNING ***Risk of puncture injures from the tip of the ski pole***
Ensure that you do not injury anybody with the tip of the ski pole when installing/uninstalling or using the unit.

⚠ CAUTION ***Risk from ejected parts***
Always secure the device properly to the ski pole. Regularly check that the unit is secure.

⚠ DANGER ***Risk of explosion from incorrectly used batteries***
Use only batteries of type "CR1225, 3 V, 50 mAh"!

⚠ CAUTION ***Risk that the displayed battery level is incorrect***
Use only batteries of type "CR1225, 3 V, 50 mAh"!

⚠ CAUTION ***Risk of extreme temperatures***
Do not expose the unit to extreme temperatures. Store the unit so that it is protected from direct sunlight. Extreme temperatures can impede operation or damage the battery.

NOTICE

The user must read the operating manual.

3. Packaging

Ensure that the unit is transported only in the packaging provided. The unit can be damaged if transported in insufficient or defective packaging. Furthermore, the unit must not be exposed to moisture or heat at any time during transport.

If stored for an extended period, the unit should be stored in its original packaging in a dry place. This is to avoid corrosion and soiling.

3.1 Unpacking

Remove the 30°PLUS XT carefully from the packaging, remove all transport safeguards and check whether all parts contained in the scope of delivery are accounted for. It is recommended to retain the original packaging in case the unit has to be returned.

NOTICE

Dispose of the packaging and transport safeguards in an environmentally friendly manner (paper to paper, plastic to plastic, etc.).

3.2 Scope of delivery

- 1x PIEPS 30°PLUS XT
- 1x battery (in battery compartment)
- 1x Quick Manual

NOTICE

Check that the contents are complete and undamaged after unpacking. If necessary, contact your point of sale or our Support team.

4. General description

4.1 Structure



(1A) Display

Shows gradient angle and temperature; turns off automatically after 15 seconds.

(1B) ON button

Press the ON button briefly to take a measurement of the slope gradient or temperature.

Press the ON button when the display is active for 3 seconds to change the unit (Celsius ↔ Fahrenheit). The setting is saved.

(1C) Simple installation on all standard ski poles

4.2 Operation

4.2.1 Measuring the slope gradient

To measure the slope gradient, choose a level place whose gradient is representative of a larger section of slope (10 m x 10 m) or the overall slope. Position the ski pole parallel to the vertical slope axis (2A).

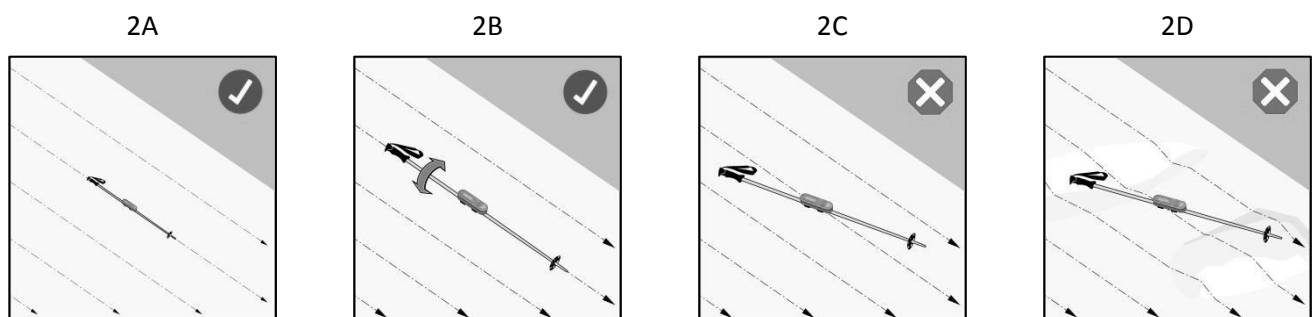
Aligning the ski pole away from the vertical slope axis will result in a false result (2C).

Pay attention to any unevenness at the measurement location - this will result in a false result (2D).

Press the ON button briefly to activate the display and the measurement. The display and measurement remain active for 15 seconds, after which the display turns off automatically.

A change in angle of the vertical slope axis (ski pole) during the measurement will be immediately shown on the display.

A rotation around the vertical slope axis (ski pole) has no effect on the gradient angle - you can eliminate any reflections in the display by rotating the ski pole (2B).



4.2.2 Temperature measurement

By installing it on a ski pole, the 30°PLUS XT exposed only to the ambient temperature and therefore provides an exact measurement of the air temperature, free from the influence of other heat sources (e.g. body heat).

NOTICE

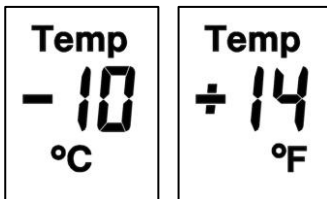
The unit must be exposed to the ambient temperature in order to ensure accurate measurements. Large temperature differences will require a period of adjustment of up to 14 minutes, e.g. from indoor at +20°C (68°F) to outdoor at -10°C (14°F). Direct sunlight can distort the measuring result.

Press the ON button (1B) briefly to activate the display and the measurement. The display and measurement remain active for 15 seconds, after which the display turns off automatically.

Press the ON button when the display is active for 15 seconds to restart the timeout.

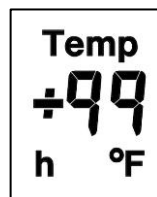
Changing the unit of measurement (Celsius ↔ Fahrenheit)

The temperature is displayed in Celsius by default. Press the ON button when the display is active for 3 seconds to change the unit of measurement. The setting is saved.



	Minimum display value	Maximum display value
Celsius	-20° C	+45° C
Fahrenheit	+4° F	+99° F

Temperatures $\geq 100^{\circ}\text{F}$ are shown on the display with “+99°F” and an “h”



5. Troubleshooting, maintenance, storage, disposal

5.1 Troubleshooting

Follow the steps below if the 30°PLUS XT does not respond when activated:

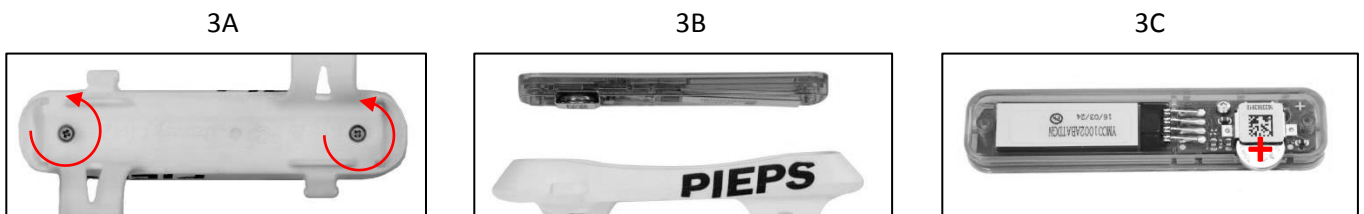
- 1) Check the 30°PLUS XT for physical damage.
- 2) Check the battery capacity, type and polarity (+,-); if necessary, fit a new battery.
- 3) Check the opened housing for moisture; if necessary, store the opened housing overnight in a dry environment at room temperature.
- 4) Reactivate the 30°PLUS XT.

If the 30°PLUS XT still does not respond, then please contact a PIEPS Service Center or our Support team (support@pieps.com).

5.2 Opening the housing and replacing the battery

Replace the battery as follows:

- Undo the two screws on the back of the housing (3A).
- Separate the upper section of the housing from the lower section (3B).
- Replace the battery with 1x lithium button battery CR1225, 3 V, 50 mAh. When installing the new battery, make sure the polarity is correct: “+” at the top (3C).
- Dispose of the battery in accordance with the law in your country.



⚠ DANGER

Risk of explosion from incorrectly used batteries

Use only lithium button batteries of type “CR1225, 3 V, 50 mAh”!

⚠ CAUTION

Risk that the displayed battery level is incorrect

Use only lithium button batteries of type “CR1225, 3 V, 50 mAh”!

5.3 Cleaning

Use a damp cloth without cleaning agent to clean the unit.

NOTICE

Flowing water, steam or cleaning agent must not be used to clean the unit. To do so could impede operation of the unit.



5.4 Storage

Store the unit in a dry room at room temperature.

NOTICE

If the unit device is not used for extended periods of time (summer months), it is recommended to remove the battery from the battery compartment. The warranty does not cover damage caused by leaking batteries.

CAUTION

Risk of extreme temperatures

Do not expose the unit to extreme temperatures. Store the unit so that it is protected from direct sunlight. Extreme temperatures can impede operation or damage the battery.



5.5 Disposal

NOTICE



Please note that the unit is an electronic device. It cannot therefore be disposed of by public waste management companies. Dispose of the unit in accordance with the law in your country.

6. Approval & conformity

The approval text and the full text of the EU conformity declaration is available at the following website:

www.pieps.com/conformity