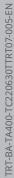


INSTRUCTIONS
DYNAMIC PRESSURE
ANEMOMETER







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## Information on the use of these instructions

## **Symbols**



## Warning of electrical voltage

This symbol indicates dangers to the life and health of persons due to electrical voltage.



### Warning

This signal word indicates a hazard with an average risk level which, if not avoided, can result in serious injury or death.



## Caution

This signal word indicates a hazard with a low risk level which, if not avoided, can result in minor or moderate injury.

### **Notice**

This signal word indicates important information (e.g. material damage), but does not indicate hazards.



#### Info

Information marked with this symbol helps you to carry out your tasks quickly and safely.



### Follow the manual

Information marked with this symbol indicates that the instructions must be observed.

You can download the current version of the instructions and the EU declaration of conformity via the following link:



TA400



https://hub.trotec.com/?id=43622

## Safety

Read this manual carefully before starting or using the device. Always store the manual in the immediate vicinity of the device or its site of use.



#### Warning

## Read all safety warnings and all instructions.

Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference.

- Do not use the device in potentially explosive rooms or areas and do not install it there.
- Do not use the device in an aggressive atmosphere.
- Do not immerse the device in water. Do not allow liquids to penetrate into the device.
- The device may only be used in dry surroundings and must not be used in the rain or at a relative humidity exceeding the operating conditions.
- Protect the device from permanent direct sunlight.
- Do not expose the device to strong vibrations.
- Do not open the device.
- Do not remove any safety signs, stickers or labels from the device. Keep all safety signs, stickers and labels in legible condition.
- Use batteries of type 6LR61 (9 V battery).
- Never charge batteries that cannot be recharged.
- Different types of batteries and new and used batteries must not be used together.
- Insert the batteries into the battery compartment according to the correct polarity.
- Remove discharged batteries. Batteries contain materials hazardous to the environment. Dispose of the batteries according to the national regulations.
- Remove the batteries from the device if you will not be using the device for a longer period of time.
- Never short-circuit the supply terminal in the battery compartment!



- Do not swallow batteries! If a battery is swallowed, it can cause severe internal burns within 2 hours! These burns can lead to death!
- If you think batteries might have been swallowed or otherwise entered the body, seek medical attention immediately!
- Keep new and used batteries and an open battery compartment away from children.
- Observe the storage and operating conditions (see Technical data).

#### Intended use

Only use the device for indoor measurements of air pressure, velocity, volume flow and temperature within the measuring range specified in the technical data. Observe and comply with the technical data.

Any use other than the intended use is regarded as misuse.

### Reasonably foreseeable misuse

Do not use the device in potentially explosive atmospheres, for measurements in liquids or at live parts.

Any unauthorised changes, modifications or alterations to the device are forbidden.

## **Personnel qualification**

People who use this device must:

 have read and understood the instructions, especially the Safety chapter.

#### Residual risks



### Warning of electrical voltage

There is a risk of a short-circuit due to liquids penetrating the housing!

Do not immerse the device and the accessories in water. Make sure that no water or other liquids can enter the housing.



### Warning of electrical voltage

Work on the electrical components must only be carried out by an authorised specialist company!



## Warning

Risk of suffocation!

Do not leave the packaging lying around. Children may use it as a dangerous toy.



### Warning

The device is not a toy and does not belong in the hands of children.



### **Warning**

Dangers can occur at the device when it is used by untrained people in an unprofessional or improper way! Observe the personnel qualifications!



### Caution

Keep a sufficient distance from heat sources.

### Notice

To prevent damages to the device, do not expose it to extreme temperatures, extreme humidity or moisture.

## **Notice**

Do not use abrasive cleaners or solvents to clean the device.



## Information about the device

## **Device description**

The anemometer TA400 is a dynamic pressure anemometer for the determination of air pressure, air velocity, air temperature and volumetric flow.

The device comes equipped with a Pitot tube and microprocessor technology for signal amplification. This combination guarantees precise measuring results.

Owing to the dual LC display and background illumination you can easily read the measuring results even in poor lighting conditions.

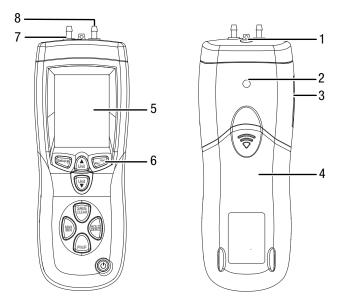
The device can measure the following parameters:

- Air pressure
  - psi
  - mbar
  - -inH<sub>2</sub>0
  - $-mmH_20$
  - Pa
- Air velocity
  - metres per second (m/s)
  - feet per minute (ft/min)
  - kilometres per hour (km/h)
  - miles per hour (mph)
  - nautical miles per hour in knots (kn)
- Air volume flow
  - CFM (cubic feet per minute)
  - CMM (cubic metres per minute)
- Air temperature
  - degrees Celsius
  - degrees Fahrenheit

The device is equipped with a HOLD function as well as with a Max/Min value display.

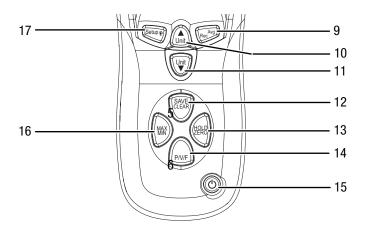
Optionally, it also possible to read and save measurement data directly on a PC by means of the software included in the scope of delivery.

## **Device depiction**



No.	Designation
1	Temperature sensor
2	Tripod thread
3	USB connection
4	Battery compartment cover
5	Display
7	- input
8	+ input

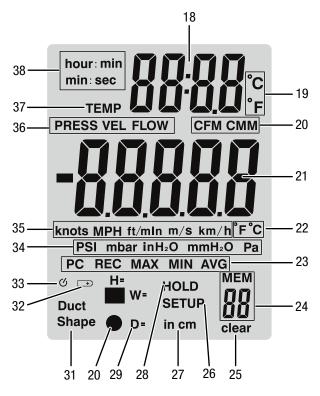
## **Operating elements**





No.	Designation	Function
9	AVG/REC button	Calling up saved measured value/ confirming the selection
10	Unit <b>A</b> button	Switching to the previous option
11	<i>Unit</i> ▼ button	Switching to the next option
12	SAVE/ CLEAR button	Saving the measured value/ deleting the measured value
13	HOLD/ZERO button	Holding the value/ resetting the value to zero
14	P/V/F button	Changing the measuring mode
15	<i>Power</i> button	Switching the device on and off
16	MAX/MIN button	Displaying the minimum/maximum value
17	Setup/illumination button	Opening the settings/ switching illumination on/off

## Display



No.	Indication	Meaning
18	Temperature/time/ info	in measuring mode: indicates the air temperature for MIN/MAX/AVG: indicates the time info: additional information for various functions
19	Temperature unit	Air temperature unit °C °F
20	CFM/CMM	Air volume flow unit

No.	Indication	Meaning
21	Measured value	Measurement value display
22	°C/°F	Temperature unit for <i>Measured</i> value indication (20)
23	Statistics	Measuring interval ( <i>REC</i> ) Maximum value ( <i>MAX</i> ) Minimum value ( <i>MIN</i> ) Average value ( <i>AVG</i> )
24	Memory	Number of saved measurements
25	Clear memory	Deleting all saved measurements
26	SETUP	Settings/setup active option
27	Length unit	Unit for air duct: in cm
28	HOLD	HOLD function active
29	Dimensions	Air duct dimensions:  H (height)  W (width)  D (diameter)
30	Shape	Air duct shape: round rectangular
31	Cross-section	Air duct cross-section selection is active
32	Battery status	Low battery level
33	Automatic switch-off	Automatic switch-off active
34	Pressure unit	Air pressure unit:  PSI  mbar  inH <sub>2</sub> 0  mmH <sub>2</sub> 0  Pa
35	Velocity unit	Air velocity unit: knots MPH ft/min m/s km/h
36	Measuring mode	Measuring modes:  TEMP (air temperature)  PRESS (differential pressure)  VEL (air velocity)  FLOW (air volume flow)
37	TEMP	Air temperature measurement
38	Time	Indication of the time: hour:min min:sec



## **Technical data**

Parameter	Value
Model	TA400
Dimensions of the device (height x width x depth)	210 x 75 x 50 mm
Weight of the device incl. Pitot tube and battery	540 g
Length of the Pitot tube	335 mm
Diameter of the Pitot tube	8 mm
Hose lengths	850 mm each
Operating conditions	0 °C to +50 °C, < 90 % RH
Storage conditions	0 °C to +50 °C, < 90 % RH
Power supply	1 x 9V battery
Air pressure	
Accuracy	± 0.3 % at +25 °C
Pressure range	0 to 5000 Pa
Pressure, max.	5000 Pa
Measuring range	PSI: $0.7252$ mbar: $50.00$ inH <sub>2</sub> 0: $20.07$ mmH <sub>2</sub> 0: $509.8$ Pa: $5000$
Resolution	PSI: 0.0001 mbar: 0.01 inH <sub>2</sub> 0: 0.01 mmH <sub>2</sub> 0: 0.1 Pa: 1
Air velocity	
Measuring range	m/s: 1 to 80.00 ft/min: 200 to 15733 km/h: 3.6 to 288.0 MPH: 2.24 to 178.66 knots: 2.0 to 154.6
Resolution	m/s: 0.01 ft/min: 1 km/h: 0.1 MPH: 0.01 knots: 0.1
Accuracy	for m/s: ±2.5 % at 10 m/s for ft/min, km/h, MPH, knots: The accuracy depends on the air velocity and the size of the air duct.

Parameter	Value	
Air volume flow		
Measuring range	CFM: 0 ft <sup>3</sup> /min to 99,999 ft <sup>3</sup> /min CMM: 0 m <sup>3</sup> /min to 99,999 m <sup>3</sup> /min	
Resolution	CFM: 0.0001 to 100 CMM: 0.001 to 100	
Temperature		
Measuring range	°C: 0 °C to 50 °C °F: 32.0 °F to 122.0 °F	
Resolution	°C: 0.1 °F: 0.1	
Accuracy	°C: ±1.0 °C °F: ±2.0 °F	

# Scope of delivery

- 1 x Device TA400 (without batteries)
- 1 x Pitot tube
- 1 x Tube, white
- 1 x Tube, black
- 1 x Transport case
- 1 x Mini USB cable
- 1 x CD-ROM with software
- 1 x Quick guide



## **Transport and storage**

#### **Notice**

If you store or transport the device improperly, the device may be damaged.

Note the information regarding transport and storage of the device.

## **Transport**

For transporting the device, use the transport case included in the scope of delivery in order to protect the device from external influences.

Before transporting the device, please observe the following:

 Remove the hoses from the connections at device and Pitot tube.

## **Storage**

When the device is not being used, observe the following storage conditions:

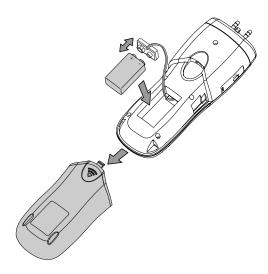
- dry and protected from frost and heat
- protected from dust and direct sunlight
- stored inside the transport case supplied in order to protect the device from external influences
- at the temperature specified in the technical data
- battery is removed from the device

## **Operation**

## **Inserting the battery**

### **Notice**

Make sure that the surface of the device is dry and the device is switched off.



- Open the battery compartment at the rear of the device by sliding the battery compartment cover (4) down at the arrow mark.
- 2. Use the battery clip to connect the 9 V battery with correct polarity.
- 3. Place the battery with the battery clip into the battery compartment.
- 4. Slide the battery compartment cover (4) back on the battery compartment.
  - ⇒ The cover should click into place.

## Switching the device on



#### Info

Please note that moving from a cold area to a warm area can lead to condensation forming on the device's circuit board. This physical and unavoidable effect can falsify the measurement. In this case, the display shows either no measured values or they are incorrect. Wait a few minutes until the device has become adjusted to the changed conditions before carrying out a measurement.

- 1. Press the *Power* button (15).
  - ⇒ The device is switched on.

### **Acoustic signal**

When pressing the *Unit*  $\blacktriangle$  (10) or *Unit*  $\blacktriangledown$  (11) button, an acoustic signal will be emitted.



## Measuring the differential pressure



#### Info

The differential pressure can only be displayed if *Type 1* or *Type 3* is selected as the display option for measuring modes (see section Setup).

In the measuring mode for *differential pressure measurements* the differential pressure of a zone 1 can be determined with regard to a reference environment (zone 2 / equipment location).

The differential pressure can be indicated in 5 different units:

- PSI
- mbar
- inH<sub>2</sub>0
- mmH<sub>2</sub>0
- Pa
- 1. Connect the white tube to the + input (8).
  - ⇒ The input (7) will not be connected to a tube.



- 2. Press the *P/V/F* button (14) until *PRESS* appears in the *Measuring mode* indication (36).
- 3. Press the *Unit* button (11) to select the desired unit for the measurement.
  - ⇒ The selected unit appears in the *Pressure unit* indication (34).
- 4. Press the *HOLD/ZERO* button (13) for approx. 2 seconds to reset the saved measured values to zero.
- 5. Position the free end of the tube in the area (zone 1) the differential pressure of which is to be determined with regard to the measuring device (zone 2).
  - ⇒ The measured differential pressure value will be indicated in the *Measured value* indication (21).
  - ⇒ A positive measured value indicates that the pressure in zone 1 is higher than in zone 2.
  - ⇒ A negative measured value indicates that the pressure in zone 1 is lower than in zone 2.
  - ⇒ The measured value 0 indicates an identical pressure in both zones.

#### Note:

Additionally, you can connect the black tube to the - input (7). Bear in mind that in that case the reference environment zone 2 is equivalent to the end of the black tube, not the device location.

## Measuring the air velocity



### Info

The air velocity can be displayed in all display options for measuring modes (see section Settings).

In the measuring mode for *air velocity measurements* the current air velocity is measured with defined standard conditions (temperature 21.1  $^{\circ}$ C / 70  $^{\circ}$ F, air pressure 14.7 psi / 1013 mbar).

The air velocity can be indicated in 5 different units:

- metres per second (m/s)
- feet per minute (ft/min)
- kilometres per hour (km/h)
- miles per hour (mph)
- nautical miles per hour in knots (kn)
- 1. Connect the white tube to the + input (8) of both the device and the Pitot tube.
- 2. Connect the black tube to the input (7) of both the device and the Pitot tube.



- 3. Press the *HOLD/ZERO* button (13) for approx. 2 seconds to reset the measured values to zero.
- 4. Press the *P/V/F* button (14) until *VEL* appears in the *Measuring mode* indication (37).
- 5. Press the *Unit* V button (11) to select the desired unit for the measurement.
  - ⇒ The selected unit appears in the *Velocity unit* indication (35).



- 6. Point the upper end of the Pitot tube towards the air flow. In doing so, make sure that the Pitot tube is not inclined more than 10° with regard to the air current.
  - ⇒ The measured value will be indicated in the *Measured* value indication (21).

If a negative measured value or the message *Error* is displayed, please check the connections at Pitot tube and device for proper fit and correct polarity.

## Measuring the air volume flow



#### Info

The air volume flow can only be displayed if *Type 2* or *Type 3* is selected as the display option for measuring modes (see section Setup).

In the measuring mode for *air volume flow measurements* the air volume flow is measured with defined standard conditions (temperature  $21.1~^{\circ}C$  /  $70~^{\circ}F$ , air pressure  $14.7~^{\circ}psi$  /  $1013~^{\circ}mbar$ ).

To achieve a measurement that is as accurate as possible, you can indicate round and angular current cross-sections incl. the precise cross-sectional areas.

The air volume flow can be indicated in 2 different units:

- CFM (cubic feet per minute)
- CMM (cubic metres per minute)
- 1. Connect the white tube to the + input (8) of both the device and the Pitot tube.
- 2. Connect the black tube to the input (7) of both the device and the Pitot tube.



- 3. Press the *P/V/F* button (14) until *FLOW* appears in the *Measuring mode* indication (36).
- 4. Press the *Unit* V button (11) to select the desired unit for the measurement.
  - ⇒ The selected unit appears in the *CFM/CMM* indication (20).

- Point the upper end of the Pitot tube towards the air flow.
   In doing so, make sure that the Pitot tube is not inclined more than 10° with regard to the air current.
  - ⇒ The measured value will be indicated in the *Measured* value indication (21).

### Measuring the air temperature

The air temperature is shown in the *Temperature/time/info* indication (18) unless this is occupied by other functions. When the air temperature is displayed, the TEMP indication (37) is illuminated.

You can always switch between the units °C and °F for the air temperature:

- 1. Press the *Unit* **\( \Limes\)** button (10).
  - ⇒ The selected unit is shown in the *Temperature* unit indication (19).

## **Displaying MIN/MAX/AVG values**

The minimum (*MIN*), maximum (*MAX*) and average (*AVG*) values can be determined via a measurement interval.

- 1. Press the *MAX/MIN* button (16) until the desired function is indicated in the *Statistics* indication (23).
  - ⇒ The *Temperature/time/info* indication (18) will be switched from temperature to time.
  - ⇒ A new measurement interval will be started.
  - $\Rightarrow$  *REC* is displayed in the *Statistics* indication (23).
  - ⇒ The *Time* indication (38) shows the current time format (minutes or hours) depending on the length of the measuring interval.
- 2. Press the *MAX/MIN* button (16) to switch between the functions.
- 3. Press the *MAX/MIN* button (16) for approx. 2 seconds to return to the normal measuring mode.

#### **Hold function**

The currently measured value can be frozen in all measuring modes.

- 1. Press the *HOLD/ZERO* button (13) to freeze the currently measured value.
- 2. Press the *HOLD/ZERO* button (13) again to deactivate the hold function.



## Saving and calling up measured values

In each measuring mode you can save up to 99 data sets.

To save a measured value, please proceed as follows:

- 1. Press the SAVE/CLEAR button (12).
  - ⇒ The current measured value will be saved.
  - ⇒ An acoustic confirmation signal will be emitted.
  - ⇒ The number of saved values in the Memory indication (24) is increased by one.

To call up a measured value, please proceed as follows:

- 1. Press the *AVG/REC* button (9) for approx. 2 seconds.
  - ⇒ *REC* will be displayed in the *Temperature/time/info* indication (18).
- 2. Press the *Unit* ▲ (10) or *Unit* ▼ (11) button to choose the desired memory location.
  - ⇒ The saved measured value is displayed in the *Measured* value indication (21).
- 3. Press the *AVG/REC* button (9) for approx. 2 seconds to return to the measuring mode.

### **Setting the background illumination**

The display comes with a background illumination that can be switched on as needed.

1. Press the *Setup/illumination* button (17) to switch the background illumination on or off.

#### Setup

In the Setup menu you can adjust the following basic settings for the device:

Menu	Function	Setting
Unit	Unit for the air duct dimensions	for determining the unit in which the air duct dimensions will be indicated
Duct Shape	Settings for the air duct	for specifying the shape and dimensions of the air duct
Туре	Display options for measuring modes	for selecting a combination of the measuring modes available
Sleep	Automatic switch- off	for de-/activating the automatic switch-off function
ALL	Clear memory	for clearing the memory; yes or no

To navigate through the Setup menu, please proceed as follows:

- ✓ The device is switched on.
- 1. Press the *Setup/illumination* button (17) for approx. 2 seconds.
  - ⇒ The Setup menu will be opened.
  - ⇒ The SETUP indication (26) lights up.
- 2. Press the *Unit* ▲ (10) or *Unit* ▼ (11) button to select the desired setting.

- 3. Press the AVG/REC button (9) to confirm the selection.
  - ⇒ The desired submenu will be opened **or**
  - ⇒ The setting will be saved.
- 4. Press the *Setup/illumination* button (17) for approx. 2 seconds to exit the Setup menu.

## Setting the measuring unit for the air duct

- 1. Open the Setup menu and select the *Unit* menu.
  - ⇒ The *Length unit* indication (27) displays the currently selected unit (*in* or *cm*).
- 2. Select the desired new unit.
- 3. Save the setting and exit the menu.

## Adjusting the shape and dimensions of the air duct

If you want to change details regarding the shape and dimensions of the air duct, please proceed as follows:

- 1. Open the Setup menu and select the *Duct Shape* menu.
  - ⇒ The submenu for the air duct shape will be opened.
- 2. Choose between a rectangular and round air duct and confirm your selection.
  - ⇒ The air duct shape is selected.
  - ⇒ Depending on the shape of the air duct, the Shape indication (30) will show a circle (round) or a square (rectangular).

If you selected a **round air duct**, you can now specify the diameter (*D*=):

- ✓ D= is displayed in the *Dimensions* indication (29).
- 1. Press the *Unit* (10) or *Unit* (11) button to change the position of the decimal point.
  - ⇒ The current value is displayed in the *Measured value* indication (21).
- 2. Repeatedly press the *SAVE/CLEAR* button (12) to select the digits of the *Measured value* indication (21) one after the other
  - ⇒ The currently selected digit flashes.
- 3. Press the *Unit* ▲ (10) or *Unit* ▼ (11) button to adjust the value (ranging between 0 and 9).
- 4. Repeat these steps until the air duct diameter is indicated correctly.
- 5. Save the set value.
  - $\Rightarrow$  The menu item *Type* is displayed.
- 6. Leave the Setup menu.



If you have selected a **rectangular air duct**, you can now specify the width (W=) and height (H=) of the flow channel:

- $\checkmark$  *W*= is displayed in the *Dimensions* indication (29).
- 1. Press the *Unit* (10) or *Unit* (11) button to change the position of the decimal point.
  - ⇒ The current value is displayed in the *Measured value* indication (21).
- 2. Repeatedly press the *SAVE/CLEAR* button (12) to select the digits of the *Measured value* indication (21) one after the other.
  - ⇒ The currently selected digit flashes.
- 3. Press the *Unit* ▲ (10) or *Unit* ▼ (11) button to adjust the value (ranging between 0 and 9).
- 4. Repeat these steps until the width of the air duct is indicated correctly and confirm your selection.
  - $\Rightarrow$  *H*= is displayed in the *Dimensions* indication (29).
- Repeat the steps for setting the width until the height of the air duct is also indicated correctly and confirm your selection.
  - $\Rightarrow$  The menu item *Type* is displayed.
- 6. Leave the Setup menu.

## Selecting the display option for measuring modes

In the TYPE menu, you can select which of the three measuring modes (air pressure, air velocity, air volume flow) should be available for measurement. There are three combinations available:

TYPE	Available measuring modes	
1	Air pressure and air velocity	
2	Air velocity and air volume flow	
3	Air pressure, air velocity and air volume flow	

- 1. Open the Setup menu and select the *TYPE* menu.
  - ⇒ *TYPE* will be indicated in the measurement value display (21).
  - ⇒ The number of the currently active combination appears in the *Temperature/time/info* indication (18).
- 2. Select the desired setting.
- 3. Leave the Setup menu.

## Setting the automatic switch-off

If automatic switch-off is activated, the device switches off automatically after approx. 5 minutes of non-use.

- 1. Open the Setup menu and select the *SLEEP* menu.
  - ⇒ On or off (activated or deactivated automatic switch-off function) will appear in the Temperature/time/info indication (18).
- 2. Select the desired setting.
- 3. Leave the Setup menu.

## **Deleting saved measurements**

There are two ways to delete measured values:

- · Deleting all saved measurements
- Deleting a certain measured value

To delete all measured values, please proceed as follows:

- 1. Open the Setup menu and select the ALL menu.
  - ⇒ The *Clear memory* indication (25) appears.
- 2. Press the AVG/REC button (9) to confirm the selection.
  - ⇒ *YES* will be displayed in the *Temperature/time/info* indication (18).
- 3. Select whether you want to delete the memory (*YES*) or not (*NO*).
- 4. Confirm your selection with the AVG/REC button (9).
  - ⇒ All saved measured values will be deleted.
- 5. Leave the Setup menu.

To delete **one** specific measured value, please proceed as follows:

- 1. Press the AVG/REC button (9) for approx. 2 seconds.
  - ⇒ *REC* will be displayed in the *Temperature/time/info* indication (18).
- 2. Select the desired memory location.
  - ⇒ The saved measured value is displayed in the *Measured* value indication (21).
- 3. Press the SAVE/CLEAR button (12).
  - ⇒ The selected measurement will be deleted.
  - ⇒ The next saved measurement will be displayed.
- 4. Press the *AVG/REC* button (9) for approx. 2 seconds to return to the measuring mode.

## Switching the device off

- 1. Press the *Power* button (15).
  - ⇒ The device is switched off.



## **Software**

The supplied free *Mano* and *Flow* software is designed for useful basic functionalities. Trotec provides no warranty with regard to this free software and also offers no support on that score. Trotec accepts no liability concerning the use of this free software and is under no obligation to make adjustments or to further develop updates or upgrades.

The software is available for download at www.trotec.de.

#### **Installation requirements**

Ensure that the following minimum requirements for installing the PC software are fulfilled:

- Supported operating systems (32 or 64 bit version):
  - Windows 10
  - Windows 8
  - Windows 7
  - Windows Vista
  - Windows XP
- Hardware requirements:
  - processor speed: min. 90 MHz
  - 32 MB RAM, minimum
  - 7 MB hard disk space, minimum
  - a minimum screen resolution of 1024 x 768 with a 16 bit colour depth

### Installing the PC software

Administrator rights are required for the software installation.

- Insert the data medium with the software into the drive or download the current software from the Service area of Trotec download centre.
  - ⇒ You can find the software in the download centre under the device name TA400.
- 2. Double-click the *setup.exe* file.
- 3. Follow the instructions of the installation wizard.
  - ⇒ The program will be installed in a few minutes.
  - ⇒ A shortcut to the program will be created on the desktop.

### Starting the PC software

- 1. Connect the measuring device to your PC via the mini USB cable provided in the scope of delivery.
- 2. Switch on the measuring device if necessary.
- 3. Start the *Mano and Flow* software.

Information about using the PC software is provided in the online help.

## **Errors and faults**

The device has been checked for proper functioning several times during production. If malfunctions occur nonetheless, check the device according to the following list.

Display	Cause	Remedy
OL	air pressure or air velocity above the measuring range	Check the battery voltage and insert a new high quality battery for testing
-0L	air pressure below the measuring range	<ul><li>purposes.</li><li>Choose a different location for measuring.</li></ul>
Error	air velocity or air volume flow below the measuring range	If the message continues to be displayed, carry out a reference measurement at a known location:  1. Choose a site within the measuring range for this measurement.  2. Press the HOLD/ZERO button (13) for approx. 2 seconds to reset the saved measured values to zero.  3. Read the measured value indication (21).  If the error code is still displayed, the device may be defective. Please contact the customer service.

## **Maintenance and repair**

## **Battery change**

A battery change is required when the *battery status* indication (32) lights up or the device can no longer be switched on (see chapter Inserting the battery).

#### Cleaning

Clean the device with a soft, damp and lint-free cloth. Make sure that no moisture enters the housing. Do not use any sprays, solvents, alcohol-based cleaning agents or abrasive cleaners, but only clean water to moisten the cloth.

### Repair

Do not modify the device or install any spare parts. For repairs or device testing, contact the manufacturer.



## **Disposal**

Always dispose of packing materials in an environmentally friendly manner and in accordance with the applicable local disposal regulations.



The icon with the crossed-out wheeled bin indicates that this device and any associated components (e.g. remote controls) must not be disposed of with household waste at the end of their life, in accordance with the Waste Electrical and Electronic Equipment Directive (2012/19/EU) and national laws.

You will find collection points for free return of waste electrical and electronic equipment in your vicinity. The addresses can be obtained from your municipality or local administration. You can also find out about other return options that apply for many EU countries on the website https://hub.trotec.com/?id=45090. Otherwise, please contact an official recycling centre for electronic and electrical equipment authorised for your country.

The separate collection of waste electrical and electronic equipment aims to enable the re-use, recycling and other forms of recovery of waste equipment as well as to prevent negative effects for the environment and human health caused by the disposal of hazardous substances potentially contained in the equipment.



This icon with the crossed-out wheeled bin indicates that batteries or accumulators must not be disposed of with household waste at the end of their life. If the device contains batteries or accumulators that contain mercury, cadmium or lead, the respective chemical symbol (Hg, Cd or Pb) is shown below the icon of the crossed-out wheeled bin. To prevent environmental pollution, do not carelessly leave batteries or electrical and electronic equipment containing batteries in public areas. In the European Union, batteries and accumulators must be returned to a designated collection point in accordance with REGULATION (EU) 2023/1542 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 12 July 2023 concerning batteries and waste batteries. Remove batteries/accumulators and dispose of them separately according to the relevant legal requirements.

## **Only for United Kingdom**

According to Waste Electrical and Electronic Equipment Regulations 2013 (SI 2013/3113) (as amended) and the Waste Batteries and Accumulators Regulations 2009 (SI 2009/890) (as amended), devices that are no longer usable must be collected separately and disposed of in an environmentally friendly manner.

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