ASIG
Elektronik GmbH

DTZ500W Meter
User Manual

About this manual

! **Important:** Please take a moment to read this manual before operating the device for the first time to ensure that you can use all the functions of your new DTZ500W meter. Keep these operating instructions in a secure and accessible location.

The DTZ500W meter for measuring revolving door speed operates in the range 0.05 m/s to 2.0 m/s. Measurement is carried out via 2 retroreflective sensors at the front end of the device.

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Features

- Measuring sensors on the front of the device, the measuring direction is user-defined.
- Battery operation 4 * AA, changeable. (CAUTION: do not insert batteries!)
- Charging via USB port Mini-A.
- Project mode with data storage, date & time.
- 10 projects with 100 readings each.
- Support program via USB for project management.
- Calibrateable.
- Auto Power Off, time adjustable from 1-90 minutes and continuous operation.
- WLAN module for operation as access point.

Getting started

Buttons and components

Familiarize yourself with the DTZ500W buttons and components.

YOUR MEASURING DEVICE
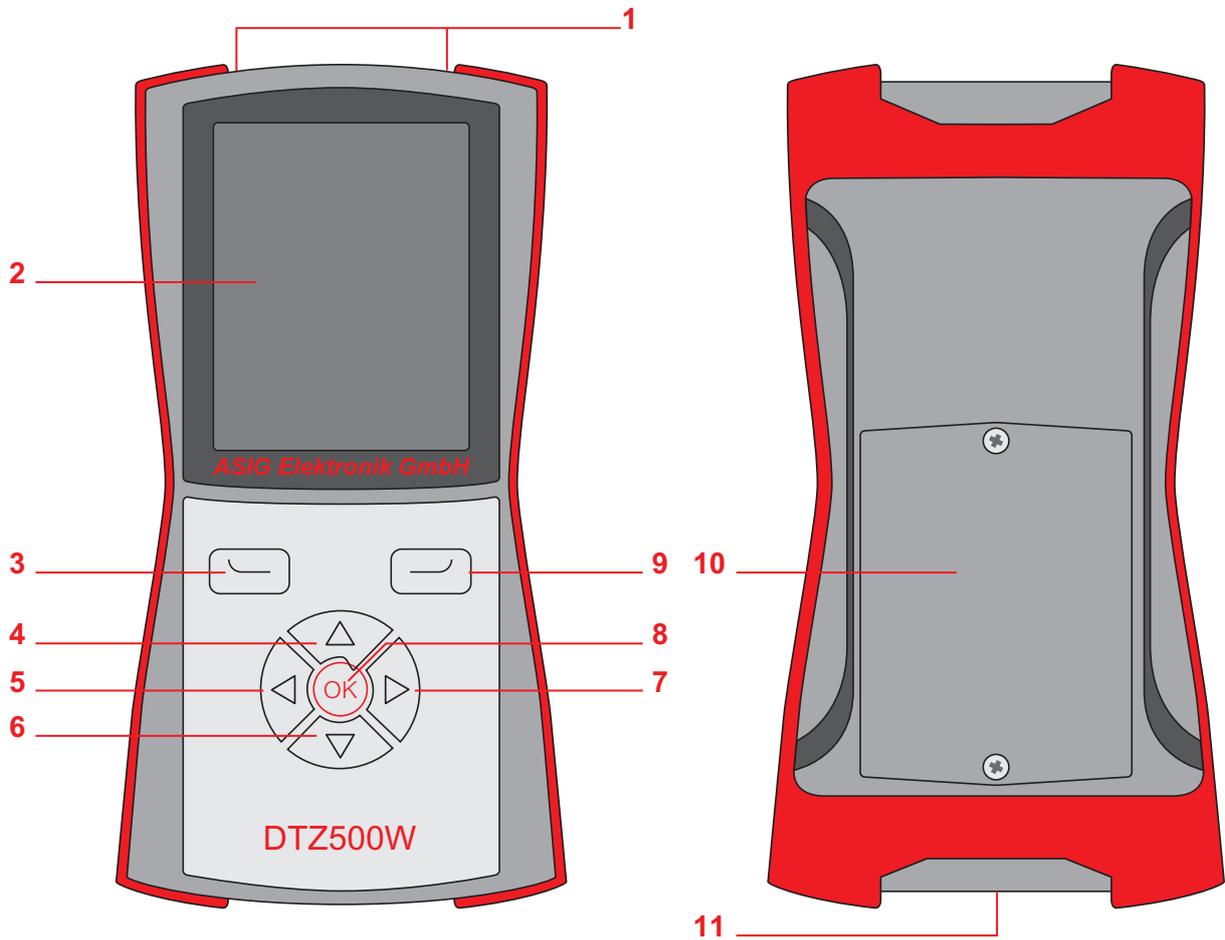
1. Measuring sensors
2. Home screen
3. Menu button
4. Menu control upwards
5. Menu control to the left
6. Menu control downwards
7. Menu control to the right
8. Power on button / OK button
9. Menu selection
10. Battery compartment
11. USB port Mini-A

ACTIVATE DEVICE

This device does not have a separate power on switch. It is activated by pressing the central (OK)-button. Power off is selected via the menu or by Auto Power Off. The device can also be powered off by pressing the (OK)-button for longer (4 seconds).

The device name is displayed briefly on the start screen.

After that, the top line always shows the current time and date, as well as a symbol for battery voltage. If there is a USB connection to the PC, USB is displayed on the same line.

In the middle of the screen, the measuring function simple fast measurement is displayed.

The bottom line shows the function of the two buttons Menu and Selection, if they are active.

The buttons △ arrow up, ▽ arrow down are equipped with a dynamic repeat. These buttons are used to change the value of the selected field.

| 14:29:16 | 🔋 17.01.2019 |
| measure | |

$$X,XX \text{ m/s}$$

Projekt Name

User Name
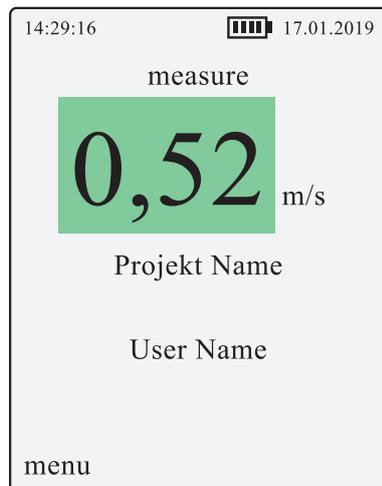
menu
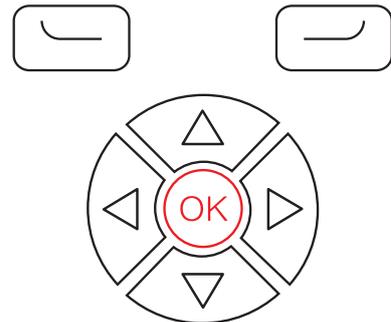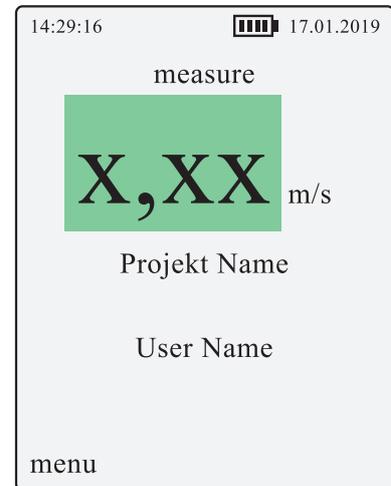
Description of individual screens

MEASURE - IM MODE SIMPLE FAST MEASUREMENT

After powering on the device, point the sensors at the area to be measured and the measurement result is displayed. The measuring direction is user-defined, right to left or left to right. The nominal distance to the measurement object is 6.5 cm. If the measurement is successful, the result is highlighted in green.

Specification in m/s (meters per second) Value range 0.03-2.50 m/s

If the measurement was incomplete, an empty field will be displayed in yellow. (Measurement started via a light sensor, but not 2. light sensor pressed)

If the reading is not within this range, X,XX is highlighted in red.

14:29:16　　　[IIII]　17.01.2019	14:29:16　　　[IIII]　17.01.2019	14:29:16　　　[IIII]　17.01.2019
measure	measure	measure
0,52 m/s	m/s	**X,XX** m/s
Projekt Name	Projekt Name	Projekt Name
User Name	User Name	User Name
menu	menu	menu
Measurement successful	Measurement incomplete	Measurement outside measuring range
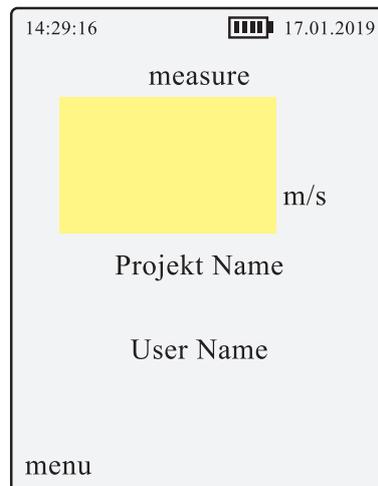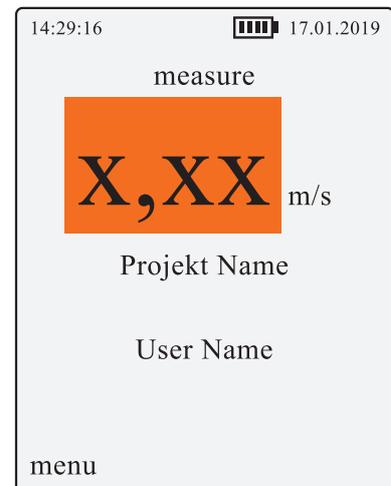
The selection menu

```
14:29:16              [IIII]  17.01.2019


   measure
   sensor test
   power off
   time & date
   language select
   Projekt
   calibration
   Configuration
   WLAN Config

menu                    select
```
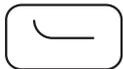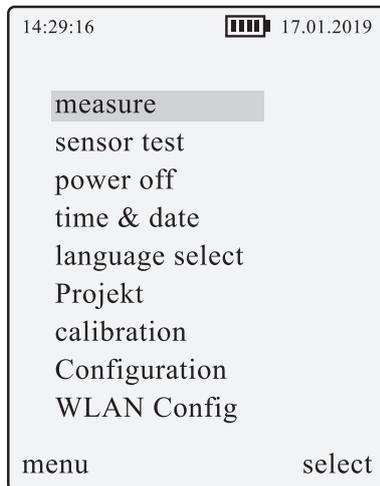
Via the button ⌒ Menu the complete selection of all function screens is displayed.
One line is highlighted in grey. This line is selected and can be activated by pressing the
button ⌒ Select. The (OK)-button also selects this function. With the buttons △arrow up
and ▽arrow down, you can move the selected line.

Measure
Directly access the menu item "Measure" with the button ⌒ Select

Sensor test
2 light grey circles are displayed. When the sensor detects an object to be measured, the
colour of the circle changes to black.

This can be used to check that the object is detected by the sensor.

Power off
This menu item has no other screen. The device is powered off directly with this selection.

```
14:29:16          [IIII] 17.01.2019

              set time

              14 : 29 : 16

              set date

            17 . 01. 2019




menu                      save
```

Time / Date

With this screen, the current time and date can be set so that they are displayed correctly in the top line. Only one field is selected at a time and is highlighted in grey. The value of this field can be changed with the $\triangle$ arrow up, ∇ arrow down buttons. The buttons have a dynamic repeat. Use the arrow right $\triangleright$ and arrow left $\triangleleft$ button to select another field.

With the button ⌐⌐ Save current data will be stored, as well as with the (OK)-button. Even when the device is powered off, the time setting remains for approx. 10 days.

Language selection:

With the menu item Language selection, a different language can be selected.

Select project

Refer to the section Device in project mode, Start project mode, page 11.

Calibration:

The menu item Calibration can be used to calibrate the meter. These data are stored permanently in the meter.

The menu item Calibration is protected by a PIN entry. The PIN is entered in the same way as for the other menus. The PIN is confirmed with the button ⟨ ⌣ ⟩ **PIN**. When the PIN is correct, the menu item is displayed as described below. If the PIN entry is incorrect, the PIN is reset to 0000.

For calibration to take place, a measurement must be performed at a known speed. The measuring speed must be within the measuring range of the meter.

After measurement, the reading is displayed in the line **Reading** and also in the line **Target value**. The value displayed in the line **Target value** is now highlighted in grey and can be set to the actual value.

Then with the ▷ arrow right or ◁ arrow left button, the field **Save** can be selected. This target value is now assigned to the measurement time by pressing the Enter button. Confirmation of the calibration is displayed as **Saved** in green.

The lower part of the screen shows the date of the calibration and a measurement factor. The measurement factor is an internal conversion value and is device-specific.

Configuration

The power-off time can be set in the configuration menu. This time can be chosen in the range of 0-90 minutes. 0 = Continuous operation

WLAN Configuration

In the menu item "WLAN Config" the WLAN module can be switched on and off.
After powering on the device, the WLAN module is always switched off and must be activated manually. This is designed to ensure a longer battery life.

The WLAN module operates in access point mode with the following configuration:
SSID: DTZ500W
WPA2-PSK: ASIG2018
IP address of the access point: 192.168.1.1

These data are fixed and can not be changed. This information is also displayed in the menu item "WLAN Config". As long as the WLAN module is activated, an icon will be displayed at the top of the screen. This symbol does not provide information about signal strength.

Access to the web server on the device
Open the following address with a web browser: http:\\\192.168.1.1

The displayed web page looks almost the same as the display of the USB tool. Only the Connect button is missing. All elements have the same function as the USB tool.

Only one device at a time can connect to the access point on the DTZ500W.

Access to the website was tested with "Firefox" and "Edge" under Windows 1709.
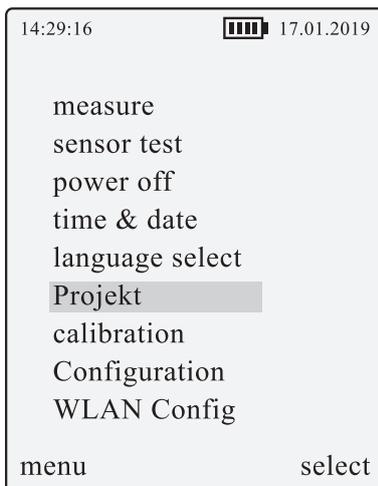
DEVICE IN PROJECT MODE, START PROJECT MODE

The meter supports a project mode that is **only usable with the USB interface**. There is also a free program for the Windows PC. The meter supports 10 projects, each with up to 100 readings. Via the PC program, 10 projects with project names and user names can be created.

Up to 100 readings can be stored for each project and retrieved via the PC program. The data is then saved as a *.CSV file where it can be edited with Excel, for example.

Each project can be edited individually via the PC program, and the project readings can also be deleted.

The project name and the user name are shown with 25 characters on the screen, on the PC with a maximum of 49 characters.
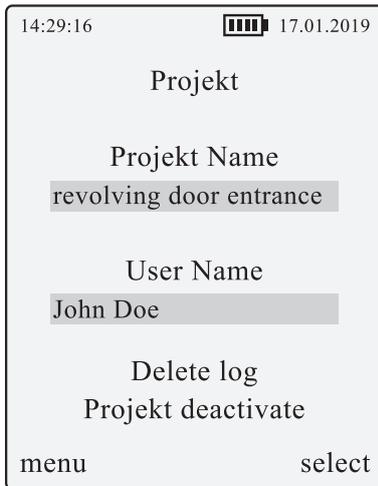
```
┌─────────────────────────────────┐
│  14:29:16        [IIII] 17.01.2019 │
│                                 │
│     measure                     │
│     sensor test                 │
│     power off                   │
│     time & date                 │
│     language select             │
│     Projekt                     │
│     calibration                 │
│     Configuration               │
│     WLAN Config                 │
│                                 │
│  menu              select       │
└─────────────────────────────────┘
```

Select project

If no project mode is selected as yet, it must first be selected with ⌐⌐ Select
Select project or activated with the (OK)-button.

After activating the project mode, project name and user name are displayed.
If readings are taken, they will be saved as part of the project.

The project mode can be deactivated by selecting Deactivate project.
The menu lines are selected using the arrow ◁ left / arrow ▷ right buttons.

```
 14:29:16          ▮▮▮▮  17.01.2019

                Projekt

            Projekt Name
   revolving door entrance


             User Name
   John Doe


            Delete log
         Projekt deactivate

 menu                  select
```

Select project   in project mode
Under the line Project name the project selected in grey is displayed. Under the line
User name, the user name belonging to this project is also displayed with a grey
background. With the △ arrow up, ▽ arrow down buttons, another project can be identified.
With the button ⌐⌐ Select or (OK)-button, this project can be selected.

With the button ◁ arrow left, ▷ arrow right, selection is set to the field Delete log. Now with
the button ⌐⌐ Select oder (OK)-button, data of the selected project can be deleted.

With the field Deactivate project, the project mode can be ended.

Measure   in project mode
The menu item Measure has some additional fields and functions in project mode.
Underneath the field displaying the Reading, the selected Project and the User name are also
displayed.

If a successful measurement is carried out, and the reading is highlighted in green, The
function Save is added to the bottom line.

With the button ⌐⌐ Save or the (OK)-button, this reading is saved in the project log. Now
the reading is no longer highlighted in green, but in white, and the "number" of the
measurement is displayed below. This number is the number in the log file that can be
retrieved via the USB program. It can be decided after each measurement whether these
data should be stored. The time listed in the log is the time of the "save", not the time of
the measurement. Saved readings cannot be deleted individually, but only via the menu
item Select project Sub item Delete log or via the PC program.

At any time, it is possible to select another project via the menu item Select project and
save readings there.

THE PC PROGRAM FOR ACCESS VIA USB PORT

The microchip driver that is supplied must first be installed on the PC. This provides a virtual COM interface. (in Windows 10, an automatic driver installation with a suitable driver from Microsoft takes place).

The PC program can be started without installation. All program files must be stored in the same folder. With Windows 10, the compatibility mode must be set up. Right-click the * .exe program and then select "Handling compatibility issues". With Windows 7, the program works without problems. The connection between the PC and the device is established via "Auto connect". The connection can also be made by manually entering the COM port and "Connect".

Now you can use the "Read" button located at the bottom left to retrieve current data from the meter. Each line is a project with project name and user.

In the background is a button "Write to File" with which the log for this project can be retrieved. A new window will open in which the readings can be saved in a file. The "Del" button on the far right deletes this project and the corresponding log data.

The fields project name and user can be changed as desired. A maximum of 49 characters are displayed, but only the first 25 characters are visible on the meter. These changes are stored in the meter with the "Save" button located at bottom centre. Saving new project data has no effect on the log data already saved on the meter. A subsequent renaming of the project is therefore possible at any time.

With the "Disconnect" button located at top centre, the connection to the meter can be disconnected.

ASIG
Elektronik GmbH

ASIG Elektronik GmbH · Kölner Straße 29 · 42781 Haan
T: +49 2129 51564 · **F:** +49 2129 59925 · **E:** info@asig-elektronik.de